



SEQUENCE LISTING

<110> Li, Li
Ballinger, Robert A
Padigaru, Muralidhara
Kekuda, Ramesh
Colman, Steven D
Spytek, Kimberly A
Casman, Stacie J
Vernet, Corine AM
Shenoy, Suresh G
Gusev, Vladimir Y
Malyankar, Uriel M
Edinger, Shlomit R
Gerlach, Valerie
Smithson, Glennnda
Stone, David J
Sciore, Paul
MacDougall, John R
Gunther, Erik
Peyman, John A
Ellerman, Karen
Gangolli, Esha A
Millet, Isabelle

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35 40 45

Ile Gly Phe Ser Ser His Leu His Thr Pro Met Tyr His Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys Gln Ser Ser Val Ile Thr Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Ser Glu Arg Asn Ile Ile Ser Tyr Pro Ala
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Cys Met Thr Gln Leu Tyr Phe Phe Leu Val Leu Val Ile Ser Glu Cys
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His Met Leu Ala Ala Met Ala Tyr Asp His Tyr Ile Ala Ile Cys Asn
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165 170 175

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Phe Tyr Gln Arg Asn Ser Ser Leu Cys Phe Ser Ala Phe Asn Ile Leu
 195 200 205

Phe Arg Ser Leu Thr Ile Leu Ser Ser Tyr Ile Phe Ile Val Ala Ser
 210 215 220

Ile Leu Cys Ile Arg Ser Thr Glu Gly Arg Ser Lys Thr Phe Ser Thr
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Cys Ser Ser His Ile Ser Ala Val Ser Val Phe Phe Gly Ser Ala Ala
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Phe Met Tyr Leu Gln Pro Ser Ser Val Ser Ser Met Asp Gln Gly Ser
 260 265 270

Val Phe Cys Val Leu Cys Tyr Cys Cys Ala His Ala Glu Pro Pro Ile
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Tyr Ile Phe Thr Leu Met Gly Asn Leu Leu Ile Leu Leu Ala Ile Val
 35 40 45

Ser Ser Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Lys Leu
 50 55 60

Ser Val Phe Asp Leu Phe Phe Pro Ser Val Ser Ser Pro Lys Met Leu
 65 70 75 80

Cys Tyr Leu Ser Gly Asn Ser Arg Ala Ile Ser Tyr Ala Gly Cys Ala
 85 90 95

Ser Gln Leu Phe Phe Tyr His Phe Leu Gly Cys Thr Glu Cys Phe Leu
 100 105 110

Tyr Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu
 115 120 125

Arg Tyr Thr Ile Ile Met Ser His Arg Ala Cys Ile Ile Leu Ala Met
 130 135 140

Gly Thr Ser Phe Phe Gly Cys Ile Gln Ala Thr Phe Leu Thr Thr Leu
 145 150 155 160

Thr Phe Gln Leu Pro Tyr Cys Val Pro Asn Glu Val Asp Tyr Tyr Phe
 165 170 175

Cys Asp Ile Pro Val Met Leu Lys Leu Ala Cys Ala Asp Thr Ser Ala
 180 185 190

Leu Glu Met Val Gly Phe Ile Ser Val Gly Leu Met Pro Leu Ser Cys
 195 200 205

Phe Leu Leu Ile Leu Thr Ser Tyr Ser Gly Ile Val Phe Ser Ile Leu
 210 215 220

Glu Ile Cys Ser Ala Glu Gly Arg Arg Arg Ala Phe Ser Thr Cys Ser
 225 230 235 240

Ala His Leu Thr Ala Ile Leu Leu Phe Tyr Met Pro Val Val Leu Ile
 245 250 255

Tyr Leu Arg Pro Thr His Ser Leu Trp Leu Asp Ala Thr Val Gln Ile
 260 265 270

Leu Asn Asn Leu Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
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Tyr Ile Phe Thr Leu Met Gly Asn Leu Leu Ile Leu Leu Ala Ile Val
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Ser Ser Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Lys Leu
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Ser Val Phe Asp Leu Phe Phe Pro Ser Val Ser Ser Pro Lys Met Leu
65 70 75 80

Cys Tyr Leu Ser Gly Asn Ser Arg Ala Ile Ser Tyr Ala Gly Cys Ala
85 90 95

Ser Gln Leu Phe Phe Tyr His Phe Leu Gly Cys Thr Glu Cys Phe Leu
100 105 110

Tyr Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu
115 120 125

Arg Tyr Thr Ile Ile Met Ser His Arg Ala Cys Ile Ile Leu Ala Met
130 135 140

Gly Thr Ser Phe Phe Gly Cys Ile Gln Ala Thr Phe Leu Thr Thr Leu
145 150 155 160

Thr Phe Gln Leu Pro Tyr Cys Val Pro Asn Glu Val Asp Tyr Tyr Phe
165 170 175

Cys Asp Ile Pro Val Met Leu Lys Leu Ala Cys Ala Asp Thr Ser Ala
180 185 190

Leu Glu Met Val Gly Phe Ile Ser Val Gly Leu Met Pro Leu Ser Cys
195 200 205

Phe Leu Leu Ile Leu Thr Ser Tyr Ser Gly Ile Val Phe Ser Ile Leu
210 215 220

Glu Ile Cys Ser Ala Glu Gly Arg Arg Arg Ala Phe Ser Thr Cys Ser
225 230 235 240

Ala His Leu Thr Ala Ile Leu Leu Phe Tyr Met Pro Val Val Leu Ile

245 250 255
 Tyr Leu Arg Pro Thr His Ser Leu Trp Leu Asp Ala Thr Val Gln Ile
 260 265 270
 Leu Asn Asn Leu Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
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Phe Ile Ile Lys Glu Glu Gln Ser Leu His Gln Pro Met Tyr Tyr Phe
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Leu Ser Leu Phe Ser Val Asn Asp Leu Gly Val Ser Phe Ser Thr Leu
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Pro Thr Val Leu Ala Ala Val Cys Phe His Ala Pro Glu Thr Thr Phe
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Asp Ala Cys Leu Ala Gln Met Phe Phe Ile His Phe Ser Ser Trp Thr
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Glu Phe Gly Ile Leu Leu Ala Met Ser Phe Asp His Tyr Val Ala Ile
 115 120 125

Cys Asn Pro Leu Arg Tyr Ala Thr Val Leu Thr Asp Val Arg Val Ala
 130 135 140

His Asn Gly Ile Ser Ile Val Ile Arg Ser Phe Cys Met Val Phe Pro
 145 150 155 160

Leu Pro Phe Leu Leu Lys Arg Leu Pro Phe Cys Lys Ala Ser Val Val
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Leu Ala His Ser Tyr Cys Leu His Ala Asp Leu Ile Arg Leu Pro Trp
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Gly Asp Thr Thr Ile Asn Ser Met Tyr Gly Leu Phe Ile Val Ile Ser
 195 200 205

Ala Phe Gly Val Asp Ser Leu Leu Ile Leu Leu Ser Tyr Val Leu Ile
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Leu His Ser Val Leu Ala Ile Ala Ser Arg Gly Glu Arg Leu Lys Thr
 225 230 235 240

Leu Asn Thr Cys Val Ser His Ile Tyr Ala Val Leu Ile Phe Tyr Val
 245 250 255

Pro Met Val Ser Val Ser Met Val His Arg Phe Gly Arg His Ala Pro
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Glu Tyr Val His Lys Phe Met Ser Leu Cys Thr Ser Asn Ala Leu Pro
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 Cys Val Asp Lys Cys Leu Gln Ser Pro Ile Tyr Phe Phe Leu Gly His
 50 55 60

Leu Cys Val Leu Glu Ile Leu Ile Thr Ser Thr Ala Val Pro Phe Met
 65 70 75 80
 Leu Trp Gly Leu Leu Leu Pro Ser Thr Gln Ile Met Ser Leu Thr Ala
 85 90 95
 Cys Ala Ala Gln Leu Tyr Leu Tyr Leu Ser Leu Gly Thr Leu Glu Leu
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 Ala Leu Met Gly Val Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn
 115 120 125
 Pro Leu Arg Tyr Asn Ile Ile Met Asn Ser Ser Thr Phe Ile Trp Val
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 Ile Ile Val Ser Trp Val Leu Gly Phe Leu Ser Glu Ile Trp Pro Val
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 Tyr Ala Thr Phe Gln Leu Thr Phe Cys Lys Ser Ser Val Leu Asp His
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 Phe Tyr Cys Asp Arg Gly Gln Leu Leu Lys Val Ser Cys Glu Asp Thr
 180 185 190
 Leu Phe Arg Glu Phe Ile Leu Phe Leu Met Ala Val Phe Ile Ile Ile
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 Gly Ser Leu Ile Pro Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr
 210 215 220
 Asn Leu Lys Ile Pro Ser Ala Ser Gly Trp Arg Lys Ser Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Phe Thr Tyr Val Val Ile Gly Tyr Gly Ser Cys Leu
 245 250 255
 Phe Leu Tyr Val Lys Pro Lys Glu Thr Gln Ala Ala Glu Tyr Asn Arg
 260 265 270
 Val Val Ser Leu Leu Val Leu Val Val Thr Pro Phe Leu Asn Pro Phe
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 His Leu Phe Leu Phe Ser Leu Thr Met Val Val Phe Leu Ile Ala Val
 50 55 60
 Ser Gly Asn Thr Leu Thr Ile Leu Leu Ile Cys Ile Asp Pro Gln Leu
 65 70 75 80

His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser Leu Met Asp Leu
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Met His Val Ser Thr Thr Ile Leu Lys Met Ala Thr Asn Tyr Leu Ser
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Gly Lys Lys Ser Ile Ser Phe Val Gly Cys Ala Thr Gln His Phe Leu
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Ala Ser Val Asn Ser Leu Ile His Met Ala Ile Leu Met His Phe Pro
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Phe Cys Gly Pro Arg Lys Val Tyr His Phe Tyr Cys Glu Phe Pro Ala
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Val Val Lys Leu Val Cys Gly Asp Ile Thr Val Tyr Glu Thr Thr Val
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Tyr Ile Ser Ser Ile Leu Leu Leu Leu Pro Ile Phe Leu Ile Ser Thr
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Ser Lys Arg Asn Ala Phe Ala Thr Cys Gly Ser His Leu Thr Val Val
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Ser Leu Trp Phe Gly Ala Cys Ile Phe Ser Tyr Met Arg Pro Arg Ser
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Gln Cys Thr Leu Leu Gln Asn Lys Val Gly Ser Val Phe Tyr Ser Ile
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Ile Thr Pro Thr Leu Asn Ser Leu Ile Tyr Thr Leu Arg Asn Lys Asp
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<210> 14
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
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 Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met
 20 25 30
 Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu
 35 40 45
 Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Ile Ile Leu Lys
 65 70 75 80
 Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly
 85 90 95
 Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys
 100 105 110
 Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met
 130 135 140
 Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met
 145 150 155 160
 Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His
 165 170 175
 Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile
 180 185 190
 Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu
 195 200 205
 Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val
 210 215 220
 Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys
 225 230 235 240
 Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe
 245 250 255
 Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val
 260 265 270
 Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile
 275 280 285
 Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu
 290 295 300
 Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu
 305 310 315 320

Pro Arg Val

<210> 15

<211> 988

<212> DNA

<213> Homo sapiens

<400> 15

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<210> 16

<211> 323

<212> PRT

<213> Homo sapiens

<400> 16

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Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
  1              5              10             15

Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met
          20              25             30

Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu
          35              40             45

Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
  50              55             60

Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Thr Ile Leu Lys
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65	70	75	80
Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly			
	85	90	95
Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys			
	100	105	110
Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His			
	115	120	125
Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met			
	130	135	140
Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met			
	145	150	155
Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His			
	165	170	175
Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile			
	180	185	190
Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu			
	195	200	205
Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val			
	210	215	220
Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys			
	225	230	235
Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe			
	245	250	255
Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val			
	260	265	270
Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile			
	275	280	285
Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu			
	290	295	300
Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu			
	305	310	315
Pro Arg Val			320

<210> 17
 <211> 1041
 <212> DNA
 <213> Homo sapiens

<400> 17
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<210> 18
 <211> 337
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Thr Val Lys Ser His Ser Ile Val Thr Glu Phe Ser Leu Arg Gly
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 Leu Thr Lys Gln Pro Asp Leu Gln Leu Phe His Phe Leu Ile Phe Leu
 20 25 30
 Asp Ile His Met Val Thr Met Val Gly Asn Leu Gly Met Ile Thr Leu
 35 40 45
 Ile Cys Leu Asn Ser Gln Leu His Thr Pro Met Tyr Tyr Phe Phe Ser
 50 55 60
 Asn Leu Ser Leu Leu Asp Leu Cys Tyr Ser Ser Ile Thr Asn Pro Lys

65	70	75	80
Met Leu Val Asn Phe Val Leu Lys Lys Ser Ile Ile Ser Tyr Ala Gly			
	85	90	95
Tyr Met Ser Lys Phe Tyr Phe Phe Leu Val Phe Val Ile Ala Arg Cys			
	100	105	110
Tyr Met Leu Met Val Lys Ala Cys Asp His Tyr Val Ala Ile Cys Cys			
	115	120	125
Pro Leu Leu Cys Asn Val Ile Met Ser His Val Thr Cys Ser Leu Met			
	130	135	140
Val Ala Val Val Tyr Thr Met Gly Leu Val Val Ser Thr Ile Glu Thr			
	145	150	155
Gly Leu Ile Leu Lys Leu Pro Tyr Cys Glu Leu Leu Thr Ser Arg Cys			
	165	170	175
Phe Cys Asp Ile Leu Pro Leu Met Lys Leu Ser Arg Ser Ser Ala Tyr			
	180	185	190
Asp Val Glu Met Ala Val Phe Phe Phe Ala Arg Phe Asn Leu Arg Ile			
	195	200	205
Met Ile Leu Thr Val Leu Val Ser Tyr Thr Phe Ile Leu Phe Ser Ile			
	210	215	220
Leu His Ile Ser Thr Thr Glu Gly Arg Ser Lys Val Phe Ser Thr Cys			
	225	230	235
Ser Phe His Leu Ala Ala Ile Gly Met Phe His Gly Lys Thr Ala Phe			
	245	250	255
Arg Tyr Leu Lys Pro Ala Ile Thr Ser Ser Leu Ala Gln Glu Asn Val			
	260	265	270
Ala Ser Val Phe Tyr Thr Thr Val Ile Tyr Val Pro Asn Pro Leu Met			
	275	280	285
Tyr Ser Leu Lys Asn Lys Asp Val Lys Ala Ala Met Gln Lys Thr Leu			
	290	295	300
Arg Ser Lys Phe Cys Cys Arg Cys Asn Tyr Leu Glu Leu Leu Ile Asn			
	305	310	315
Pro Ile Gln Tyr Gln Tyr Arg Lys Glu Ala Phe Trp Arg Phe Thr Lys			

325

330

335

Pro

<210> 19

<211> 937

<212> DNA

<213> Homo sapiens

<400> 19

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<210> 20

<211> 310

<212> PRT

<213> Homo sapiens

<400> 20

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Met Ala Pro Gly Asn Gly Ser Phe Val Thr Glu Phe Ile Leu Ala Gly
 1             5             10             15

Leu Thr His Gln Pro Asp Leu Gln Ser Pro Leu Phe Phe Leu Phe Leu
      20             25             30

Val Ile Tyr Val Val Thr Leu Leu Gly Asn Leu Gly Leu Val Thr Leu
      35             40             45

Ile Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
      50             55             60

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Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Ile Pro Lys
 65 70 75 80

Met Leu Met Asn Phe Ile Ser Glu Lys Asn Ile Met Ser Phe Lys Gly
 85 90 95

Cys Met Thr Gln Leu Ser Phe Ser Arg Phe Phe Trp Ser Phe Leu Lys
 100 105 110

Val Met Cys Arg Arg Gln Trp Arg Met Ile Ala Val Ala Ile Cys Thr
 115 120 125

Pro Leu Leu Tyr His Ile Ala Met Ser Pro Thr Val Cys Ser Ser Leu
 130 135 140

Met Phe Gly Ser Tyr Leu Met Pro Phe Ser Gly Ala Met Ala His Thr
 145 150 155 160

Gly Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asp His
 165 170 175

Tyr Phe Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
 180 185 190

Tyr Ile Asn Glu Leu Val Val Phe Thr Val Val Gly Ile Asn Ile Ile
 195 200 205

Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser
 210 215 220

Ile Leu His Ile Ser Ser Lys Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala
 245 250 255

Phe Met Tyr Leu Asn Pro Ser Ser Ala Gly Ser Met Asp Lys Arg Lys
 260 265 270

Leu Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Phe Ala Leu Arg Lys Ala
 290 295 300

Leu Ser Ser Arg Lys Leu
 305 310

<210> 21
 <211> 937
 <212> DNA
 <213> Homo sapiens

<400> 21
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 cttcttcctc tttaacttgt ccttcataga tctctgttat tcttctgtgt ttacacccaa 240
 aatgctaattg aactttatctt cagagaagaa tattatctcc ttcaaggggt gcatgaccca 300
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<210> 22
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Ala Pro Gly Asn Gly Ser Phe Val Thr Glu Phe Ile Leu Ala Gly
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 Leu Thr His Gln Pro Asp Leu Gln Ser Pro Leu Phe Phe Leu Phe Leu
 20 25 30
 Val Ile Tyr Val Val Thr Leu Leu Gly Asn Leu Gly Leu Val Thr Leu
 35 40 45
 Ile Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
 50 55 60
 Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
 65 70 75 80
 Met Leu Met Asn Phe Ile Ser Glu Lys Asn Ile Ile Ser Phe Lys Gly
 85 90 95

Cys Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Trp Ser Phe Leu Asn
 100 105 110
 Val Met Cys Arg Arg Gln Trp Arg Met Ile Ala Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Leu Tyr His Ile Ala Met Ser Pro Thr Val Cys Ser Ser Leu
 130 135 140
 Met Phe Gly Ser Tyr Leu Met Ala Phe Ser Gly Ala Met Ala His Thr
 145 150 155 160
 Gly Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asp His
 165 170 175
 Tyr Phe Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
 180 185 190
 Tyr Ile Asn Glu Leu Val Val Phe Thr Val Val Gly Ile Asn Ile Ile
 195 200 205
 Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser
 210 215 220
 Ile Leu His Ile Ser Ser Lys Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala
 245 250 255
 Phe Met Tyr Leu Asn Pro Ser Ser Ala Gly Ser Met Asp Lys Arg Lys
 260 265 270
 Leu Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Phe Ala Leu Arg Lys Ala
 290 295 300
 Leu Ser Ser Arg Lys Leu
 305 310

<210> 23
 <211> 937
 <212> DNA
 <213> Homo sapiens

<400> 23

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<210> 24

<211> 310

<212> PRT

<213> Homo sapiens

<400> 24

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Met Ala Pro Gly Asn Gly Ser Phe Val Thr Glu Phe Ile Leu Ala Gly
  1             5             10             15

Leu Thr His Gln Pro Asp Leu Gln Ser Pro Leu Phe Phe Leu Phe Leu
      20             25             30

Val Ile Tyr Val Val Thr Leu Leu Gly Asn Leu Gly Leu Val Thr Leu
      35             40             45

Ile Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
      50             55             60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
      65             70             75             80

Met Leu Met Asn Phe Ile Ser Glu Lys Asn Ile Ile Ser Phe Lys Gly
      85             90             95

Cys Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Trp Ser Phe Leu Asn
      100            105            110

Val Met Cys Arg Arg Gln Trp Arg Met Ile Ala Val Ala Ile Cys Asn
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115	120	125
Pro Leu Leu Tyr His Ile Ala Met Ser Pro Thr Val Cys Ser Ser Leu		
130	135	140
Met Phe Gly Ser Tyr Leu Met Ala Phe Ser Gly Ala Met Ala His Thr		
145	150	155
		160
Gly Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asp His		
	165	170
		175
Tyr Phe Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr		
	180	185
		190
Tyr Ile Asn Glu Leu Val Val Phe Thr Val Val Gly Ile Asn Ile Ile		
	195	200
		205
Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser		
	210	215
		220
Ile Leu His Ile Ser Ser Lys Glu Gly Arg Ser Lys Ala Phe Ser Thr		
225	230	235
		240
Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala		
	245	250
		255
Phe Met Tyr Leu Asn Pro Ser Ser Ala Gly Ser Met Asp Lys Arg Lys		
	260	265
		270
Leu Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu		
	275	280
		285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Phe Ala Leu Arg Lys Ala		
290	295	300
Leu Ser Ser Arg Lys Leu		
305	310	

<210> 25

<211> 937

<212> DNA

<213> Homo sapiens

<400> 25

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<210> 26
<211> 310
<212> PRT
<213> Homo sapiens

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<400> 26
Met Ala Pro Gly Asn Gly Ser Phe Val Thr Glu Phe Ile Leu Ala Gly
  1             5             10             15

Leu Thr His Gln Pro Asp Leu Gln Ser Pro Leu Phe Phe Leu Phe Leu
      20             25             30

Val Ile Tyr Val Val Thr Leu Leu Gly Asn Leu Gly Leu Val Thr Leu
      35             40             45

Ile Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
      50             55             60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
      65             70             75             80

Met Leu Met Asn Phe Ile Ser Glu Lys Asn Ile Ile Ser Phe Lys Gly
      85             90             95

Cys Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Trp Ser Phe Leu Asn
      100            105            110

Val Met Cys Arg Arg Gln Trp Arg Met Ile Ala Val Ala Ile Cys Asn
      115            120            125

Pro Leu Leu Tyr His Ile Ala Met Ser Pro Thr Val Cys Ser Ser Leu
      130            135            140

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Met Phe Gly Ser Tyr Leu Met Ala Phe Ser Gly Ala Met Ala His Thr
 145 150 155 160
 Gly Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asp His
 165 170 175
 Tyr Phe Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
 180 185 190
 Tyr Ile Asn Glu Leu Val Val Phe Thr Val Val Gly Ile Asn Ile Ile
 195 200 205
 Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser
 210 215 220
 Ile Leu His Ile Ser Ser Lys Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala
 245 250 255
 Phe Met Tyr Leu Asn Pro Ser Ser Ala Gly Ser Met Asp Lys Arg Lys
 260 265 270
 Leu Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Phe Ala Leu Arg Lys Ala
 290 295 300
 Leu Ser Ser Arg Lys Leu
 305 310

<210> 27

<211> 958

<212> DNA

<213> Homo sapiens

<400> 27

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 catggtaggc aaccttggct tgatcattct tttcgggtcta aattctcacc tccacacacc 180
 aatgtactat ttctcttca atctctcctt cattgatctc tgttactcct ctgttttcac 240
 tcccaaaatg ctaatgaact ttgtatcaaa aaagaatatt atctctatg ttgggtgcat 300
 gactcagctg tttttcttct tcttttttgt catctctgaa tgttacatgt tgacctcaat 360
 ggcatatgat cgctatgtgg ccatctgtaa tccattgctg tataaggcca ccatgtccca 420
 tcaggctctgt tctatgctca cttttgctgc ttacataatg ggattggctg gagccacggc 480

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ccacaccggg tgcattgctta gactcacctt ctgcagtgtc aatatcatca accattactt 540
gtgtgacata cccccctcc tccagctttc ctgcaccagc acctatgtca acgaggtggt 600
tggttctcatt gttgtgggta ttaatatcat ggtaccagc tgtaccatcc tcatttctta 660
tggttctcatt gtcactagca ttcttcataa caaatccact caaggaagat caaaagcctt 720
cagtacttgt agctctcatg tcattgctct gtctctgttt tttgggtcag cggcattcat 780
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<210> 28
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 28

Met	Leu	Ala	Arg	Asn	Asn	Ser	Leu	Val	Thr	Glu	Phe	Ile	Leu	Ala	Gly	1	5	10	15
Leu	Thr	Asp	His	Pro	Glu	Phe	Gln	Gln	Pro	Leu	Phe	Phe	Leu	Phe	Leu	20	25	30	
Val	Val	Tyr	Ile	Val	Thr	Met	Val	Gly	Asn	Leu	Gly	Leu	Ile	Ile	Leu	35	40	45	
Phe	Gly	Leu	Asn	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Phe	50	55	60	
Asn	Leu	Ser	Phe	Ile	Asp	Leu	Cys	Tyr	Ser	Ser	Val	Phe	Thr	Pro	Lys	65	70	75	80
Met	Leu	Met	Asn	Phe	Val	Ser	Lys	Lys	Asn	Ile	Ile	Ser	Tyr	Val	Gly	85	90	95	
Cys	Met	Thr	Gln	Leu	Phe	Phe	Phe	Leu	Phe	Phe	Val	Ile	Ser	Glu	Cys	100	105	110	
Tyr	Met	Leu	Thr	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	115	120	125	
Pro	Leu	Leu	Tyr	Lys	Val	Thr	Met	Ser	His	Gln	Val	Cys	Ser	Met	Leu	130	135	140	
Thr	Phe	Ala	Ala	Tyr	Ile	Met	Gly	Leu	Ala	Gly	Ala	Thr	Ala	His	Thr	145	150	155	160
Gly	Cys	Met	Leu	Arg	Leu	Thr	Phe	Cys	Ser	Ala	Asn	Ile	Ile	Asn	His	165	170	175	

Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
180 185 190

Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Met
195 200 205

Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
210 215 220

Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
245 250 255

Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
260 265 270

Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
290 295 300

Ile Lys Ile Gln Arg Arg Asn Ile Phe
305 310

<210> 29

<211> 892

<212> DNA

<213> Homo sapiens

<400> 29

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gttgctctct tagggaacag catgataccta ttggttgta ttctggagcc aaacctccat 180
gaacccatgt actgttttct cttcatgctg tctgccgctg acctggggct gacctctcc 240
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tgtatcatcc agctctttt cctccacagc tctggcttta tggaatcctc agtactgatg 360
gccatggctt ttgaccgctt tgttgccatt tgcagacccc tcagatatgc taccatcctg 420
acagactcca gaattctaaa gattggtgta gcaatagtc taagaacatt gatcagcctc 480
tctccatccc tctttctcat taagagactg tcattttgca aagtcaatgt cctttcccat 540
tcttactgct tccacctga tgcgcttaaa gttgcatgt ctgattcaag gatgaacagc 600
tatggaggct tagctgttct cattctggtc accgggggtg gtacaccatg tgttgcgctt 660
tcctacatcc tgataatcca ctctgtacta aacatcatct cttcagaggg acggaggaag 720
gccttcgaca cttgtggatc tcacattggg gcagttgcag tcttctacat tccctgggtt 780

gttctttcag ttgtccacag atttttccac aaggcttcac caatatgtcc acccactatt 840
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<210> 30
 <211> 294
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Pro His Leu Ser Asn Thr Thr Ser Glu Phe Pro Ile Phe Leu Leu
 1 5 10 15
 Thr Gly Phe Pro Gly Leu Glu Ala Phe His Ile Trp Ile Ser Ile Pro
 20 25 30
 Phe Phe Leu Leu Ser Thr Val Ala Leu Leu Gly Asn Ser Met Ile Leu
 35 40 45
 Leu Val Val Ile Leu Glu Pro Asn Leu His Glu Pro Met Tyr Cys Phe
 50 55 60
 Leu Phe Met Leu Ser Ala Ala Asp Leu Gly Leu Thr Leu Ser Thr Met
 65 70 75 80
 Pro Thr Thr Leu Ser Val Leu Trp Phe Ser Ala Arg Glu Ile Ile Leu
 85 90 95
 Asn Ala Cys Ile Ile Gln Leu Phe Phe Leu His Ser Ser Gly Phe Met
 100 105 110
 Glu Ser Ser Val Leu Met Ala Met Ala Phe Asp Arg Phe Val Ala Ile
 115 120 125
 Cys Arg Pro Leu Arg Tyr Ala Thr Ile Leu Thr Asp Ser Arg Ile Leu
 130 135 140
 Lys Ile Gly Val Ala Ile Val Leu Arg Thr Leu Ile Ser Leu Ser Pro
 145 150 155 160
 Ser Leu Phe Leu Ile Lys Arg Leu Ser Phe Cys Lys Val Asn Val Leu
 165 170 175
 Ser His Ser Tyr Cys Phe His Pro Asp Ala Leu Lys Val Ala Cys Ser
 180 185 190
 Asp Ser Arg Met Asn Ser Tyr Gly Gly Leu Ala Val Leu Ile Leu Val
 195 200 205

Thr Gly Val Gly Thr Pro Cys Val Ala Leu Ser Tyr Ile Leu Ile Ile
 210 215 220

His Ser Val Leu Asn Ile Ile Ser Ser Glu Gly Arg Arg Lys Ala Phe
 225 230 235 240

Asp Thr Cys Gly Ser His Ile Gly Ala Val Ala Val Phe Tyr Ile Pro
 245 250 255

Trp Val Val Leu Ser Val Val His Arg Phe Phe His Lys Ala Ser Pro
 260 265 270

Ile Cys Pro Pro Thr Ile Val Gln His Leu Phe Pro Trp Pro Leu Ser
 275 280 285

Ala Glu Pro His His Ile
 290

<210> 31
 <211> 1013
 <212> DNA
 <213> Homo sapiens

<400> 31
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 aggaaagcca gcaactggatt gcaactgccc tgggcatcct ttacctcctt gctttagtgg 180
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 cccttgcaagt gctcctgggt catgcccacg agattgggta catcgtctgc ctgatccaga 360
 tgttcttcat ccatgcattc tcctccatgg agtcaggggt acttgtggcc atggctctgg 420
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 ttttggtggg aacacttata ttctgccaag ccaccatcat aggccatgcc tattgtgaac 600
 atatggctgt tgtgaaactt gcctgctcag aaaccacagt caatcgagct tatgggctga 660
 ctatggcctt gcttgtgatt gggctggatg ttctggccat tgggtgttcc tatgcccaca 720
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 tcctcatgcc acctgcgctc aatcctcttg tctatggagt gaagactcag cagatccgcc 960
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<210> 32
 <211> 329
 <212> PRT

<213> Homo sapiens

<400> 32

Met Asn Leu Asp Ser Phe Phe Ser Phe Leu Leu Lys Ser Leu Ile Met
1 5 10 15

Ala Leu Ser Asn Ser Ser Trp Arg Leu Pro Gln Pro Ser Phe Phe Leu
20 25 30

Val Gly Ile Pro Gly Leu Glu Glu Ser Gln His Trp Ile Ala Leu Pro
35 40 45

Leu Gly Ile Leu Tyr Leu Leu Ala Leu Val Gly Asn Val Thr Ile Leu
50 55 60

Phe Ile Ile Trp Met Asp Pro Ser Leu His Gln Ser Met Tyr Leu Phe
65 70 75 80

Leu Ser Met Leu Ala Ala Ile Asp Leu Val Val Ala Ser Ser Thr Ala
85 90 95

Pro Lys Ala Leu Ala Val Leu Leu Val Arg Ala Gln Glu Ile Gly Tyr
100 105 110

Thr Val Cys Leu Ile Gln Met Phe Phe Thr His Ala Phe Ser Ser Met
115 120 125

Glu Ser Gly Val Leu Val Ala Met Ala Leu Asp Arg Tyr Val Ala Ile
130 135 140

Cys His Pro Leu His His Ser Thr Ile Leu His Pro Gly Val Ile Gly
145 150 155 160

His Ile Gly Met Val Val Leu Val Arg Gly Leu Leu Leu Leu Ile Pro
165 170 175

Phe Leu Ile Leu Leu Arg Lys Leu Ile Phe Cys Gln Ala Thr Ile Ile
180 185 190

Gly His Ala Tyr Cys Glu His Met Ala Val Val Lys Leu Ala Cys Ser
195 200 205

Glu Thr Thr Val Asn Arg Ala Tyr Gly Leu Thr Val Ala Leu Leu Val
210 215 220

Val Gly Leu Asp Val Leu Ala Ile Gly Val Ser Tyr Ala His Ile Leu
225 230 235 240

Gln Ala Val Leu Lys Val Pro Gly Asn Glu Ala Arg Leu Lys Ala Phe
245 250 255

Ser Thr Cys Gly Ser His Val Cys Val Ile Leu Val Phe Tyr Ile Pro
260 265 270

Gly Met Phe Ser Phe Leu Thr His Arg Phe Gly His His Val Pro His
275 280 285

His Val His Val Leu Leu Ala Ile Leu Tyr Arg Leu Val Pro Pro Ala
290 295 300

Leu Asn Pro Leu Val Tyr Arg Val Lys Thr Gln Lys Ile His Gln Gly
305 310 315 320

Val Leu Arg Val Phe Thr Leu Lys Asp
325

<210> 33

<211> 1021

<212> DNA

<213> Homo sapiens

<400> 33

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ttcctacctt gttgctttcc ttgggaacag cctcatcatc ttcacatca tcaactgaatg 180
cagcctccac gaaccatgt accttttcct ctgcatgctg gctgtggctg accttatcct 240
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a 1021
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<210> 34

<211> 328

<212> PRT

<213> Homo sapiens

<400> 34

Met Thr Thr His Asn Ser Thr Gly Ser Ser His Ser Leu Phe Ile Leu
1 5 10 15
Leu Ser Ile Pro Gly Leu Glu Asp Gln His Thr Trp Met Ser Leu Pro
20 25 30
Phe Phe Ile Ser Tyr Leu Val Ala Phe Leu Gly Asn Ser Leu Ile Ile
35 40 45
Phe Ile Ile Ile Thr Glu Cys Ser Leu His Glu Pro Met Tyr Leu Phe
50 55 60
Leu Cys Met Leu Ala Val Ala Asp Leu Ile Leu Ser Thr Thr Thr Val
65 70 75 80
Pro Lys Ala Leu Ala Ile Phe Trp Phe Tyr Ala Gly Ala Ile Ser Leu
85 90 95
Gly Gly Cys Val Thr Gln Ile Phe Phe Ile His Ala Thr Phe Ile Glu
100 105 110
Glu Ser Gly Ile Leu Leu Ala Met Ala Leu Asp Arg Tyr Val Ala Ile
115 120 125
Cys Asp Pro Leu His Tyr Thr Thr Val Leu Ser Arg Ala Lys Ile Thr
130 135 140
Lys Ile Gly Leu Ala Val Val Leu Arg Ser Phe Cys Val Ile Met Pro
145 150 155 160
Asp Val Phe Leu Val Lys Arg Leu Pro Phe Cys His Ser Asn Leu Leu
165 170 175
Pro His Thr Tyr Cys Glu His Met Ala Val Ala Lys Phe Ala Cys Ala
180 185 190
Asp Ile His Val Asn Val Trp Tyr Gly Leu Ser Val Leu Leu Tyr Thr
195 200 205
Val Val Leu Asp Ala Leu Leu Ile Leu Val Ser Tyr Ser Phe Ile Leu
210 215 220
Tyr Thr Gly Phe His Leu Pro Ser Pro Arg Ser Ser Ala Lys Gly Ser
225 230 235 240

<400> 36

Met Ala Asn Leu Thr Ile Val Thr Glu Phe Ile Leu Met Gly Phe Ser
1 5 10 15

Thr Asn Lys Asn Met Cys Ile Leu His Ser Ile Leu Phe Leu Leu Ile
20 25 30

Tyr Leu Cys Ala Leu Met Gly Asn Val Leu Ile Ile Met Ile Thr Thr
35 40 45

Leu Asp His His Leu His Thr Pro Val Tyr Phe Phe Leu Lys Asn Leu
50 55 60

Ser Phe Leu Asp Leu Cys Leu Ile Ser Val Thr Ala Pro Lys Ser Ile
65 70 75 80

Ala Asn Ser Leu Ile His Asn Asn Ser Ile Ser Phe Leu Gly Cys Val
85 90 95

Ser Gln Val Phe Leu Leu Leu Ser Ser Ala Ser Ala Glu Leu Leu Leu
100 105 110

Leu Thr Val Met Ser Phe Asp Arg Tyr Thr Ala Ile Cys His Pro Leu
115 120 125

His Tyr Asp Val Ile Met Asp Arg Ser Thr Cys Val Gln Arg Ala Thr
130 135 140

Val Ser Trp Leu Tyr Gly Gly Leu Ile Ala Val Met His Thr Ala Gly
145 150 155 160

Thr Phe Ser Leu Ser Tyr Cys Gly Ser Asn Met Val His Gln Phe Phe
165 170 175

Cys Asp Ile Pro Gln Leu Leu Ala Ile Ser Cys Ser Glu Asn Leu Ile
180 185 190

Arg Glu Ile Ala Leu Ile Leu Ile Asn Val Val Leu Asp Phe Cys Cys
195 200 205

Phe Ile Val Ile Ile Ile Thr Tyr Val His Val Phe Ser Thr Val Lys
210 215 220

Lys Ile Pro Ser Thr Glu Gly Gln Ser Lys Ala Tyr Ser Ile Cys Leu
225 230 235 240

Pro His Leu Leu Val Val Leu Phe Leu Ser Thr Gly Phe Ile Ala Tyr
245 250 255

Leu Lys Pro Ala Ser Glu Ser Pro Ser Ile Leu Asp Ala Val Ile Ser
260 265 270

Val Phe Tyr Thr Met Leu Pro Pro Thr Phe Asn Pro Ile Ile Tyr Ser
275 280 285

Leu Arg Asn Lys Ala Ile Lys Val Ala Leu Gly Met Leu Ile Lys Gly
290 295 300

Lys Leu Thr Lys Lys
305

<210> 37
<211> 982
<212> DNA
<213> Homo sapiens

<400> 37
ataatggtac gaaatacttc tacacatatt tcatggccaa aaccaataat tcagaagtta 60
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atctttctag tgatcaattt aagtagtgc atgggtagcc ttgggttaat tatgctaatt 180
catatcagtc ctcagcttca cacagctatg tatttttttc tcagccacgt agcttttggt 240
tatttttgct acacctcctc tatcacccct aacagcctag tgaacctcct ccaagaaact 300
aaaagaatat ccttacctac ttgtgcctct cagttgcatt gctttatcat gtttgtgggt 360
tgtgacatgt atgtgctctc agccatggca tatgacaggt atgtggccat ctgcaaccct 420
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gattcaaata taataaataa ttcctattgt gatgatgttc ccctagcatg tctaccctat 600
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actacaagat aaatgacctt gg 982

<210> 38
<211> 322
<212> PRT
<213> Homo sapiens

<400> 38
Met Val Arg Asn Thr Ser Thr His Ile Ser Trp Pro Lys Pro Ile Ile
1 5 10 15

Gln Lys Leu Leu Asn Ser Ser Ser Trp Asp Ser Gln Thr Ile Gln Ser
 20 25 30
 Ser Lys Pro Phe Phe Arg Gly Ile Phe Leu Val Ile Asn Leu Ser Ser
 35 40 45
 Val Met Gly Ser Leu Gly Leu Ile Met Leu Ile His Ile Ser Pro Gln
 50 55 60
 Leu His Thr Ala Met Tyr Phe Phe Leu Ser His Val Ala Phe Val Tyr
 65 70 75 80
 Phe Cys Tyr Thr Ser Ser Ile Thr Pro Asn Ser Leu Val Asn Leu Leu
 85 90 95
 Gln Glu Thr Lys Arg Ile Ser Leu Pro Thr Cys Ala Ser Gln Leu His
 100 105 110
 Cys Phe Ile Met Phe Val Val Cys Asp Met Tyr Val Leu Ser Ala Met
 115 120 125
 Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu Leu Tyr Ser Ile
 130 135 140
 Ile Met Asn Arg Arg Val Cys Ile Gln Met Val Val Ser Thr Tyr Leu
 145 150 155 160
 Tyr Gly Phe Ser Val Arg Leu Leu Gln Ala Ile Leu Thr Phe His Leu
 165 170 175
 Ser Phe Arg Asp Ser Asn Ile Ile Asn Asn Ser Tyr Cys Asp Asp Val
 180 185 190
 Pro Leu Ala Cys Leu Pro Tyr His Lys Asn His Tyr Lys Asp Val Lys
 195 200 205
 Glu Leu Ile Leu Phe Thr Leu Ala Gly Phe Asn Thr Leu Phe Ser Leu
 210 215 220
 Leu Ile Ile Leu Ile Ser Tyr Ile Ser Val Leu Ser Ala Ile Leu Arg
 225 230 235 240
 Ile Asn Ser Ala Glu Ser Arg Gln Lys Ala Phe Ser Thr Cys Asp Ser
 245 250 255
 His Leu Thr Ser Ile Ile Ile Phe Tyr Gly Ile Ile Thr Phe Met Tyr
 260 265 270

Met Gln Gly Lys Thr Asn Asn Ser Leu Asp Thr Asp Lys Ile Ala Ser
 275 280 285

Val Phe Cys Ile Val Lys Ile Pro Ser Ile Tyr Ser Leu Arg Asn His
 290 295 300

Glu Val Lys Asp Ala Leu Lys Met Ile Met Glu Asn Leu Cys Leu Thr
 305 310 315 320

Thr Arg

<210> 39

<211> 1010

<212> DNA

<213> Homo sapiens

<400> 39

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tgctgggcaa tcttgggttg attactttaa tcaagattga tactcgactc cacacaccta 180
tgtactatct cctcagccac ctggcctttg ttgaccttg ttactcctct gctattacac 240
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atgcctcaaa gaaagccttg gataaagggt gtgaaaactt acagatatta acatttttaa 960
aaataagaaa actttattaa acaagcagga aataaatcaa actttttctt 1010

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<210> 40

<211> 324

<212> PRT

<213> Homo sapiens

<400> 40

Met Ala Glu Val Asn Ile Ile Tyr Val Thr Val Phe Ile Leu Lys Gly
 1 5 10 15

Ile Thr Asn Arg Pro Glu Leu Gln Ala Pro Cys Phe Gly Val Phe Leu

20	25	30
Val Ile Tyr Leu Val Thr Val Leu Gly Asn Leu Gly Leu Ile Thr Leu		
35	40	45
Ile Lys Ile Asp Thr Arg Leu His Thr Pro Met Tyr Tyr Phe Leu Ser		
50	55	60
His Leu Ala Phe Val Asp Leu Cys Tyr Ser Ser Ala Ile Thr Pro Lys		
65	70	75
Met Met Val Asn Phe Val Val Glu Arg Asn Thr Ile Pro Phe His Ala		
85	90	95
Cys Ala Thr Gln Leu Gly Cys Phe Leu Thr Phe Met Ile Thr Glu Cys		
100	105	110
Phe Leu Leu Ala Ser Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Ser		
115	120	125
Pro Leu His Tyr Ser Thr Leu Met Ser Arg Arg Val Cys Ile Gln Leu		
130	135	140
Val Ala Val Pro Tyr Ile Tyr Ser Phe Leu Val Ala Leu Phe His Thr		
145	150	155
Val Ile Thr Phe Arg Leu Thr Tyr Cys Gly Pro Asn Leu Ile Asn His		
165	170	175
Phe Tyr Cys Asp Asp Leu Pro Phe Leu Ala Leu Ser Cys Ser Asp Thr		
180	185	190
His Met Lys Glu Ile Leu Ile Phe Ala Phe Ala Gly Phe Asp Met Ile		
195	200	205
Ser Ser Ser Ser Ile Val Leu Thr Ser Tyr Ile Phe Ile Ile Ala Ala		
210	215	220
Ile Leu Arg Ile Arg Ser Thr Gln Gly Gln His Lys Ala Ile Ser Thr		
225	230	235
Cys Gly Ser His Met Val Thr Val Thr Ile Phe Tyr Gly Thr Leu Ile		
245	250	255
Phe Met Tyr Leu Gln Pro Lys Ser Asn His Ser Leu Asp Thr Asp Lys		
260	265	270
Met Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu		

275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Ser Lys Lys Ala
 290 295 300
 Leu Asp Lys Gly Cys Glu Asn Leu Gln Ile Leu Thr Phe Leu Lys Ile
 305 310 315 320
 Arg Lys Leu Tyr

<210> 41
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 41
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 atgggaaaca cagtcacat catgattgtc tgtgtggata aacgtctgca gtcccccattg 180
 tatttcttcc tcggccacct ctctgccctg gagatcctgg tcacaacct aatcgtcccc 240
 gtgatgcttt ggggattgct gctccctggg atgcagacaa tatatttgtc tgectgtgtt 300
 gtccagctct tcttgtacct tgctgtgggg acaacagagt tcgcattact tggagcaatg 360
 gctgtggacc gttatgtggc tgtctgtaac cctctgaggc acaacatcat tatgaacaga 420
 cacacctgca actttgtggc tcttgtgtca tgggtgtttg ggtttctttt tcaaactctgg 480
 ccggtctatg tcatgtttca gcttacttac tgcaaataca atgtggtgaa caattttttt 540
 tgtgaccgag ggcaattgct caaactatcc tgcaataata ctcttttcac ggagtttatc 600
 ctcttcttaa tggctgtttt tgttctcttt ggttctttga tccctacaat tgtctccaac 660
 gcctacatca tctccacct tctcaagatc ccgtcatcct ctggccggag gaaatccttc 720
 tccacttggt cctccactt cacctgtgtt gtgattggct acggcagctg cttgtttctc 780
 tacgtgaaac ccaagcaaac gcaggcagct gattacaatt gggtagtctt cctgatgggt 840
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 gaggcccttc ggatgggggt aaacgctgct 930

<210> 42
 <211> 304
 <212> PRT
 <213> Homo sapiens

<400> 42
 Met Leu Met Asn Tyr Ser Ser Ala Thr Glu Phe Tyr Leu Leu Gly Phe
 1 5 10 15
 Pro Gly Ser Glu Glu Leu His His Ile Leu Phe Ala Ile Phe Phe Phe
 20 25 30

Phe Tyr Leu Val Thr Leu Met Gly Asn Thr Val Ile Ile Met Ile Val
35 40 45
Cys Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Gly His
50 55 60
Leu Ser Ala Leu Glu Ile Leu Val Thr Thr Ile Ile Val Pro Val Met
65 70 75 80
Leu Trp Gly Leu Leu Leu Pro Gly Met Gln Thr Ile Tyr Leu Ser Ala
85 90 95
Cys Val Val Gln Leu Phe Leu Tyr Leu Ala Val Gly Thr Thr Glu Phe
100 105 110
Ala Leu Leu Gly Ala Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn
115 120 125
Pro Leu Arg Tyr Asn Ile Ile Met Asn Arg His Thr Cys Asn Phe Val
130 135 140
Val Leu Val Ser Trp Val Phe Gly Phe Leu Phe Gln Ile Trp Pro Val
145 150 155 160
Tyr Val Met Phe Gln Leu Thr Tyr Cys Lys Ser Asn Val Val Asn Asn
165 170 175
Phe Phe Cys Asp Arg Gly Gln Leu Leu Lys Leu Ser Cys Asn Asn Thr
180 185 190
Leu Phe Thr Glu Phe Ile Leu Phe Leu Met Ala Val Phe Val Leu Phe
195 200 205
Gly Ser Leu Ile Pro Thr Ile Val Ser Asn Ala Tyr Ile Ile Ser Thr
210 215 220
Ile Leu Lys Ile Pro Ser Ser Ser Gly Arg Arg Lys Ser Phe Ser Thr
225 230 235 240
Cys Ala Ser His Phe Thr Cys Val Val Ile Gly Tyr Gly Ser Cys Leu
245 250 255
Phe Leu Tyr Val Lys Pro Lys Gln Thr Gln Ala Ala Asp Tyr Asn Trp
260 265 270
Val Val Ser Leu Met Val Ser Val Val Thr Pro Phe Leu Asn Pro Phe
275 280 285

Ile Phe Thr Leu Arg Asn Asp Lys Val Ile Glu Ala Leu Arg Met Gly
 290 295 300

<210> 43
 <211> 1073
 <212> DNA
 <213> Homo sapiens

<400> 43
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 cctcttgggc ttctcctcct ttggtgagct gcaggccctt ctgtatggcc ccttcctcat 180
 gctttatctt ctgccttca tgggaaacac catcatcata gttatggtca tagctgacac 240
 ccacctacat acacctatgt acttcttctt gggcaatttt tccctgctgg agatcttggg 300
 aacctgact gcagtgccca ggatgctctc agacctgttg gtccccaca aagtcattac 360
 cttcactggc tgcattgtcc agttctactt ccacttttcc ctgggggtcca cctccttctc 420
 catcctgaca gacatggccc ttgatcgctt tgtggccatc tgccaccac tgcgctatgg 480
 cactctgatg agccgggcta tgtgtgtcca gctggctggg gctgcctggg cagctccttt 540
 cctagccatg gtaccactg tctctcccg agctcatctt gattactgcc atggcgacgt 600
 catcaaccac ttcttctgtg acaatgaacc tctcctgcag ttgtcatgct ctgacactcg 660
 cctgttgga tttctggact ttctgatggc cttgaccttt gtctcagct ccttcctggg 720
 gacctcacc tctatggct acatagtac cactgtgctg cggatcccct ctgccagcag 780
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 caatcagaca gttaaacag tgctacagg gcagatgcag aggctgaaag gcctttgcaa 1020
 ggcaaatga tgagcccagg gccaggggga acctggcctg cctccattga gca 1073

<210> 44
 <211> 341
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Val Leu Cys Leu Tyr Leu Ser Val Ser Ala Ser Pro Ser Val Phe
 1 5 10 15
 Cys Phe Ser Cys Met Gln Gly Pro Ile Leu Trp Ile Met Ala Asn Leu
 20 25 30
 Ser Gln Pro Ser Glu Phe Val Leu Leu Gly Phe Ser Ser Phe Gly Glu
 35 40 45

Leu Gln Ala Leu Leu Tyr Gly Pro Phe Leu Met Leu Tyr Leu Leu Ala
 50 55 60

Phe Met Gly Asn Thr Ile Ile Ile Val Met Val Ile Ala Asp Thr His
 65 70 75 80

Leu His Thr Pro Met Tyr Phe Phe Leu Gly Asn Phe Ser Leu Leu Glu
 85 90 95

Ile Leu Val Thr Met Thr Ala Val Pro Arg Met Leu Ser Asp Leu Leu
 100 105 110

Val Pro His Lys Val Ile Thr Phe Thr Gly Cys Met Val Gln Phe Tyr
 115 120 125

Phe His Phe Ser Leu Gly Ser Thr Ser Phe Leu Ile Leu Thr Asp Met
 130 135 140

Ala Leu Asp Arg Phe Val Ala Ile Cys His Pro Leu Arg Tyr Gly Thr
 145 150 155 160

Leu Met Ser Arg Ala Met Cys Val Gln Leu Ala Gly Ala Ala Trp Ala
 165 170 175

Ala Pro Phe Leu Ala Met Val Pro Thr Val Leu Ser Arg Ala His Leu
 180 185 190

Asp Tyr Cys His Gly Asp Val Ile Asn His Phe Phe Cys Asp Asn Glu
 195 200 205

Pro Leu Leu Gln Leu Ser Cys Ser Asp Thr Arg Leu Leu Glu Phe Trp
 210 215 220

Asp Phe Leu Met Ala Leu Thr Phe Val Leu Ser Ser Phe Leu Val Thr
 225 230 235 240

Leu Ile Ser Tyr Gly Tyr Ile Val Thr Thr Val Leu Arg Ile Pro Ser
 245 250 255

Ala Ser Ser Cys Gln Lys Ala Phe Ser Thr Cys Gly Ser His Leu Thr
 260 265 270

Leu Val Phe Ile Gly Tyr Ser Ser Thr Ile Phe Leu Tyr Val Arg Pro
 275 280 285

Gly Lys Ala His Ser Val Gln Val Arg Lys Val Val Ala Leu Val Thr
 290 295 300

Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Leu Thr Phe Cys Asn
 305 310 315 320

Gln Thr Val Lys Thr Val Leu Gln Gly Gln Met Gln Arg Leu Lys Gly
 325 330 335

Leu Cys Lys Ala Gln
 340

<210> 45
 <211> 1024
 <212> DNA
 <213> Homo sapiens

<400> 45
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 cccttcctca tgctttatct tctcgccttc atgggaaaca ccatcatcat agttatggc 180
 atagctgaca cccacctaca tacacccatg tacttcttcc tgggcaattt ttccctgctg 240
 gagatcttgg taaccatgac tgcagtggcc aggatgctct cagacctgtt ggtccccac 300
 aaagtcatta ccttcaactg ctgcatggc cagttctact tccacttttc cctgggggtcc 360
 acctccttcc tcatcctgac agacatggcc cttgatcgct ttgtggccat ctgccaccca 420
 ctgcgctatg gcactctgat gagccgggct atgtgtgtcc agctggctgg ggctgcctgg 480
 gcagctcctt tcctagccat ggtaccact gtccctctcc gagctcatct tgattactgc 540
 catggcgacg tcatcaacca cttcttctgt gacaatgaac ctctcctgca gttgtcatgc 600
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 agca 1024

<210> 46
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 46
 Met Gln Gly Pro Ile Leu Trp Ile Met Ala Asn Leu Ser Gln Pro Ser
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 Glu Phe Val Leu Leu Gly Phe Ser Ser Phe Gly Glu Leu Gln Ala Leu
 20 25 30

Leu Tyr Gly Pro Phe Leu Met Leu Tyr Leu Leu Ala Phe Met Gly Asn
 35 40 45
 Thr Ile Ile Ile Val Met Val Ile Ala Asp Thr His Leu His Thr Pro
 50 55 60
 Met Tyr Phe Phe Leu Gly Asn Phe Ser Leu Leu Glu Ile Leu Val Thr
 65 70 75 80
 Met Thr Ala Val Pro Arg Met Leu Ser Asp Leu Leu Val Pro His Lys
 85 90 95
 Val Ile Thr Phe Thr Gly Cys Met Val Gln Phe Tyr Phe His Phe Ser
 100 105 110
 Leu Gly Ser Thr Ser Phe Leu Ile Leu Thr Asp Met Ala Leu Asp Arg
 115 120 125
 Phe Val Ala Ile Cys His Pro Leu Arg Tyr Gly Thr Leu Met Ser Arg
 130 135 140
 Ala Met Cys Val Gln Leu Ala Gly Ala Ala Trp Ala Ala Pro Phe Leu
 145 150 155 160
 Ala Met Val Pro Thr Val Leu Ser Arg Ala His Leu Asp Tyr Cys His
 165 170 175
 Gly Asp Val Ile Asn His Phe Phe Cys Asp Asn Glu Pro Leu Leu Gln
 180 185 190
 Leu Ser Cys Ser Asp Thr Arg Leu Leu Glu Phe Trp Asp Phe Leu Met
 195 200 205
 Ala Leu Thr Phe Val Leu Ser Ser Phe Leu Val Thr Leu Ile Ser Tyr
 210 215 220
 Gly Tyr Ile Val Thr Thr Val Leu Arg Ile Pro Ser Ala Ser Ser Cys
 225 230 235 240
 Gln Lys Ala Phe Ser Thr Cys Gly Ser His Leu Thr Leu Val Phe Ile
 245 250 255
 Gly Tyr Ser Ser Thr Ile Phe Leu Tyr Val Arg Pro Gly Lys Ala His
 260 265 270
 Ser Val Gln Val Arg Lys Val Val Ala Leu Val Thr Ser Val Leu Thr
 275 280 285

Pro Phe Leu Asn Pro Phe Ile Leu Thr Phe Cys Asn Gln Thr Val Lys
 290 295 300

Thr Val Leu Gln Gly Gln Met Gln Arg Leu Lys Gly Leu Cys Lys Ala
 305 310 315 320

Gln

<210> 47
 <211> 965
 <212> DNA
 <213> Homo sapiens

<400> 47
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 gcaccagccc atgtttctac tgttggccat cctggcagcc acagacctgg gcttagccac 240
 atctatagcc ccaggggtgc tggctgtgct gtggcttggg ccccgatctg tgccatatgc 300
 tgtgtgcctg gtccagatgt tctttgtaca tgcactgact gccatggaat caggtgtgct 360
 tttggccatg gcctgtgatc gtgctgcggc aataggcgt cactgcact accctgtcct 420
 ggtcaccaaa gcctgtgtgg gttatgcagc cttggccctg gactgaaag ctgtggctat 480
 tgttgtaacct ttccactgc tgggtggcaaa gtttgagcac ttccaagcca agaccatagg 540
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 caacttatat ggtctggcac tttcactggc catctcaggt atggatattc tgggtatcac 660
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 ccttctctcc aacatctact tgctgctgcc acctgccctc aacccctca tctatggggc 900
 ccgcaccaag cagatcagag accgactcct ggaaacctc acattcagaa aaagcccgtt 960
 gtaat 965

<210> 48
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 48
 Met Ala Glu Thr Leu Gln Leu Asn Ser Thr Phe Leu His Pro Asn Phe
 1 5 10 15
 Phe Ile Leu Thr Gly Phe Pro Gly Leu Gly Ser Ala Gln Thr Trp Leu
 20 25 30
 Thr Leu Val Phe Gly Pro Ile Tyr Leu Leu Ala Leu Leu Gly Asn Gly

35	40	45
Ala Leu Pro Ala Val Val Trp Ile Asp Ser Thr Leu His Gln Pro Met		
50	55	60
Phe Leu Leu Leu Ala Ile Leu Ala Ala Thr Asp Leu Gly Leu Ala Thr		
65	70	75 80
Ser Ile Ala Pro Gly Leu Leu Ala Val Leu Trp Leu Gly Pro Arg Ser		
	85 90	95
Val Pro Tyr Ala Val Cys Leu Val Gln Met Phe Phe Val His Ala Leu		
	100 105	110
Thr Ala Met Glu Ser Gly Val Leu Leu Ala Met Ala Cys Asp Arg Ala		
	115 120	125
Ala Ala Ile Gly Arg Pro Leu His Tyr Pro Val Leu Val Thr Lys Ala		
	130 135	140
Cys Val Gly Tyr Ala Ala Leu Ala Leu Ala Leu Lys Ala Val Ala Ile		
145	150 155	160
Val Val Pro Phe Pro Leu Leu Val Ala Lys Phe Glu His Phe Gln Ala		
	165 170	175
Lys Thr Ile Gly His Thr Tyr Cys Ala His Met Ala Val Val Glu Leu		
	180 185	190
Val Val Gly Asn Thr Gln Ala Thr Asn Leu Tyr Gly Leu Ala Leu Ser		
	195 200	205
Leu Ala Ile Ser Gly Met Asp Ile Leu Gly Ile Thr Gly Ser Tyr Gly		
	210 215	220
Leu Ile Ala His Ala Val Leu Gln Leu Pro Thr Arg Glu Ala His Ala		
225	230 235	240
Lys Ala Phe Gly Thr Cys Ser Ser His Ile Cys Val Ile Leu Ala Phe		
	245 250	255
Tyr Ile Pro Gly Leu Phe Ser Tyr Leu Ala His Arg Phe Gly His His		
	260 265	270
Thr Val Pro Lys Pro Val His Ile Leu Leu Ser Asn Ile Tyr Leu Leu		
	275 280	285
Leu Pro Pro Ala Leu Asn Pro Leu Ile Tyr Gly Ala Arg Thr Lys Gln		

290	295	300
Ile Arg Asp Arg Leu Leu Glu Thr Phe Thr Phe Arg Lys Ser Pro Leu		
305	310	315 320

<210> 49
 <211> 986
 <212> DNA
 <213> Homo sapiens

<400> 49

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tgcacatga gtcacaccaa tgttaccatc ttccatcctg cagtttttgt ccttcctggc 60
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gccaatcttt atgtggcagt gccaccaatg ctgaaccca ttgtctatgg tgtgaagact 900
aagcagatac gtgaggggtg agcccacggg ttctttgaca tcaagacttg gtgctgtacc 960
tcccctctgg gctcatgaat cttcat 986
  
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<210> 50
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 50

Met Ser His Thr Asn Val Thr Ile Phe His Pro Ala Val Phe Val Leu
1 5 10 15
Pro Gly Ile Pro Gly Leu Glu Ala Tyr His Ile Trp Leu Ser Ile Pro
20 25 30
Leu Cys Leu Ile Tyr Ile Thr Ala Val Leu Gly Asn Ser Ile Leu Ile
35 40 45

Val Val Ile Val Met Glu Arg Asn Leu His Val Pro Met Tyr Phe Phe
 50 55 60

Leu Ser Met Leu Ala Val Met Asp Ile Leu Leu Ser Thr Thr Thr Val
 65 70 75 80

Pro Lys Ala Leu Ala Ile Phe Trp Leu Gln Ala His Asn Ile Ala Phe
 85 90 95

Asp Ala Cys Val Thr Gln Gly Phe Phe Val His Met Met Phe Val Gly
 100 105 110

Glu Ser Ala Ile Leu Leu Ala Met Ala Phe Asp Arg Phe Val Ala Ile
 115 120 125

Cys Ala Pro Leu Arg Tyr Thr Thr Val Leu Thr Trp Pro Val Val Gly
 130 135 140

Arg Ile Ala Leu Ala Val Ile Thr Arg Ser Phe Cys Ile Ile Phe Pro
 145 150 155 160

Val Ile Phe Leu Leu Lys Arg Leu Pro Phe Cys Leu Thr Asn Ile Val
 165 170 175

Pro His Ser Tyr Cys Glu His Ile Gly Val Ala Arg Leu Ala Cys Ala
 180 185 190

Asp Ile Thr Val Asn Ile Trp Tyr Gly Phe Ser Val Pro Ile Val Met
 195 200 205

Val Ile Leu Asp Val Ile Leu Ile Ala Val Ser Tyr Ser Leu Ile Leu
 210 215 220

Arg Ala Val Phe Arg Leu Pro Ser Gln Asp Ala Arg His Lys Ala Leu
 225 230 235 240

Ser Thr Cys Gly Ser His Leu Cys Val Ile Leu Met Phe Tyr Val Pro
 245 250 255

Ser Phe Phe Thr Leu Leu Thr His His Phe Gly Arg Asn Ile Pro Gln
 260 265 270

His Val His Ile Leu Leu Ala Asn Leu Tyr Val Ala Val Pro Pro Met
 275 280 285

Leu Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Gly
 290 295 300

Val Ala His Arg Phe Phe Asp Ile Lys Thr Trp Cys Cys Thr Ser Pro
 305 310 315 320

Leu Gly Ser

<210> 51
 <211> 990
 <212> DNA
 <213> Homo sapiens

<400> 51
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 tgtggctatg gtagggaatt gtggactcct ctacctcatt cactatgagg atgccctgca 180
 caaaccctatg tactacttct tggccatgct ttccctttact gaccttgta tgtgctctag 240
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 aaccaaacag atacgagact gtgtcataag gatcctttca ggttctaagg ataccaaacc 960
 ctacagcatg tgaatgaaca cttgccagga 990

<210> 52
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 52
 Met Leu Thr Leu Asn Lys Thr Asp Leu Ile Pro Ala Ser Phe Ile Leu
 1 5 10 15
 Asn Gly Val Pro Gly Leu Glu Asp Thr Gln Leu Trp Ile Ser Phe Pro
 20 25 30
 Phe Cys Ser Met Tyr Val Val Ala Met Val Gly Asn Cys Gly Leu Leu
 35 40 45

Tyr Leu Ile His Tyr Glu Asp Ala Leu His Lys Pro Met Tyr Tyr Phe
 50 55 60

Leu Ala Met Leu Ser Phe Thr Asp Leu Val Met Cys Ser Ser Thr Ile
 65 70 75 80

Pro Lys Ala Leu Cys Ile Phe Trp Phe His Leu Lys Asp Ile Gly Phe
 85 90 95

Asp Glu Cys Leu Val Gln Met Phe Phe Ile His Thr Phe Thr Gly Met
 100 105 110

Glu Ser Gly Val Leu Met Leu Met Ala Leu Asp Arg Tyr Val Ala Ile
 115 120 125

Cys Tyr Pro Leu Arg Tyr Ser Thr Ile Leu Thr Asn Pro Val Ile Ala
 130 135 140

Lys Val Gly Thr Ala Thr Phe Leu Arg Gly Val Leu Leu Ile Ile Pro
 145 150 155 160

Phe Thr Phe Leu Thr Lys Arg Leu Pro Tyr Cys Arg Gly Asn Ile Leu
 165 170 175

Pro His Thr Tyr Cys Asp His Met Ser Val Ala Lys Leu Ser Cys Gly
 180 185 190

Asn Val Lys Val Asn Ala Ile Tyr Gly Leu Met Val Ala Leu Leu Ile
 195 200 205

Gly Gly Phe Asp Ile Leu Cys Ile Thr Ile Ser Tyr Thr Met Ile Leu
 210 215 220

Arg Ala Val Val Ser Leu Ser Ser Ala Asp Ala Arg Gln Lys Ala Phe
 225 230 235 240

Asn Thr Cys Thr Ala His Ile Cys Ala Ile Val Phe Ser Tyr Thr Pro
 245 250 255

Ala Phe Phe Ser Phe Phe Ser His Arg Phe Gly Glu His Ile Ile Pro
 260 265 270

Pro Ser Cys His Ile Ile Val Ala Asn Ile Tyr Leu Leu Leu Pro Pro
 275 280 285

Thr Met Asn Pro Ile Val Tyr Gly Val Lys Thr Lys Gln Ile Arg Asp
 290 295 300

Cys Val Ile Arg Ile Leu Ser Gly Ser Lys Asp Thr Lys Ser Tyr Ser
 305 310 315 320

Met

<210> 53
 <211> 1006
 <212> DNA
 <213> Homo sapiens

<400> 53
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 ctatctctgc ccctggcact actgtatctc tcagcacttg ctgcaaacac cctcatcctc 180
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 agactgaact cagctgaagc tgcagccaag gccctgagca cttgtagttc acatctcacc 780
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<210> 54
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 54
 Met Asn His Met Ser Ala Ser Leu Lys Ile Ser Asn Ser Ser Lys Phe
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 Gln Val Ser Glu Phe Ile Leu Leu Gly Phe Pro Gly Ile His Ser Trp
 20 25 30
 Gln His Trp Leu Ser Leu Pro Leu Ala Leu Leu Tyr Leu Ser Ala Leu
 35 40 45
 Ala Ala Asn Thr Leu Ile Leu Ile Ile Ile Trp Gln Asn Pro Ser Leu

50	55	60
Gln Gln Pro Met Tyr Ile Phe Leu Gly Ile Leu Cys Met Val Asp Met		
65	70	75 80
Gly Leu Ala Thr Thr Ile Ile Pro Lys Ile Leu Ala Ile Phe Trp Phe		
	85	90 95
Asp Ala Lys Val Ile Ser Leu Pro Glu Cys Phe Ala Gln Ile Tyr Ala		
	100	105 110
Ile His Phe Phe Val Gly Met Glu Ser Gly Ile Leu Leu Cys Met Ala		
	115	120 125
Phe Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr Pro Ser Ile		
	130	135 140
Val Thr Ser Ser Leu Ile Leu Lys Ala Thr Leu Phe Met Val Leu Arg		
	145	150 155 160
Asn Gly Leu Phe Val Thr Pro Val Pro Val Leu Ala Ala Gln Arg Asp		
	165	170 175
Tyr Cys Ser Lys Asn Glu Ile Glu His Cys Leu Cys Ser Asn Leu Gly		
	180	185 190
Val Thr Ser Leu Ala Cys Asp Asp Arg Arg Pro Asn Ser Ile Cys Gln		
	195	200 205
Leu Val Leu Ala Trp Leu Gly Met Gly Ser Asp Leu Ser Leu Ile Ile		
	210	215 220
Leu Ser Tyr Ile Leu Ile Leu Tyr Ser Val Leu Arg Leu Asn Ser Ala		
	225	230 235 240
Glu Ala Ala Ala Lys Ala Leu Ser Thr Cys Ser Ser His Leu Thr Leu		
	245	250 255
Ile Leu Phe Phe Tyr Thr Ile Val Val Val Ile Ser Val Thr His Leu		
	260	265 270
Thr Glu Met Lys Ala Thr Leu Ile Pro Val Leu Leu Asn Val Leu His		
	275	280 285
Asn Ile Ile Pro Pro Ser Leu Asn Pro Thr Val Tyr Ala Leu Gln Thr		
	290	295 300
Lys Glu Leu Arg Ala Ala Phe Gln Lys Val Leu Phe Ala Leu Thr Lys		

305

310

315

320

Glu Ile Arg Ser

<210> 55

<211> 950

<212> DNA

<213> Homo sapiens

<400> 55

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gaagctgcat ccaaggcctt aagtacctgc acctcccacc tcatcttaat ccttttcttc 720
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ccagttctac ttaatgtgct acacaatgtc attccccctg ccctgaaccc catggtatat 840
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<210> 56

<211> 299

<212> PRT

<213> Homo sapiens

<400> 56

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Met Gly Phe Pro Gly Ile His Ser Trp Gln His Trp Leu Ser Leu Pro
  1             5             10             15

Leu Ala Leu Leu Tyr Leu Leu Ala Leu Ser Ala Asn Ile Leu Ile Leu
      20             25             30

Ile Ile Ile Asn Lys Glu Ala Ala Leu His Gln Pro Met Tyr Tyr Phe
      35             40             45

Leu Gly Ile Leu Ala Met Ala Asp Ile Gly Leu Ala Thr Thr Ile Met
      50             55             60

```

Pro Lys Ile Leu Ala Ile Leu Trp Phe Asn Ala Lys Thr Ile Ser Leu
 65 70 75 80
 Leu Glu Cys Phe Ala Gln Met Tyr Ala Ile His Cys Phe Val Ala Met
 85 90 95
 Glu Ser Ser Thr Phe Val Cys Met Ala Ile Asp Arg Tyr Val Ala Ile
 100 105 110
 Cys Arg Pro Leu Arg Tyr Pro Ser Ile Ile Thr Glu Ser Phe Val Phe
 115 120 125
 Lys Ala Asn Gly Phe Met Ala Leu Arg Asn Ser Leu Cys Leu Ile Ser
 130 135 140
 Val Pro Leu Leu Ala Ala Gln Arg His Tyr Cys Ser Gln Asn Gln Ile
 145 150 155 160
 Glu His Cys Leu Cys Ser Asn Leu Gly Val Thr Ser Leu Ser Cys Asp
 165 170 175
 Asp Arg Arg Ile Asn Ser Ile Asn Gln Val Leu Leu Ala Trp Thr Leu
 180 185 190
 Met Gly Ser Asp Leu Gly Leu Ile Ile Leu Ser Tyr Ala Leu Ile Leu
 195 200 205
 Tyr Ser Val Leu Lys Leu Asn Ser Pro Glu Ala Ala Ser Lys Ala Leu
 210 215 220
 Ser Thr Cys Thr Ser His Leu Ile Leu Ile Leu Phe Phe Tyr Thr Val
 225 230 235 240
 Ile Ile Val Ile Ser Ile Thr Arg Ser Thr Gly Met Arg Val Pro Leu
 245 250 255
 Ile Pro Val Leu Leu Asn Val Leu His Asn Val Ile Pro Pro Ala Leu
 260 265 270
 Asn Pro Met Val Tyr Ala Leu Lys Asn Lys Glu Leu Arg Gln Gly Leu
 275 280 285
 Tyr Lys Val Leu Arg Leu Gly Val Lys Gly Thr
 290 295

<210> 57

<211> 939

<212> DNA

<213> Homo sapiens

<400> 57

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ctggcctgga acctctccct cattgtttta ataaggatgg attccacact ccatacacc 180
atgtatttct tcctcagtaa cctgtccttc atagatgtct gctatatcag ctccacagtc 240
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attcagtact ttatcttttc aacgatggga ctgagtgagt cttgtctcat gacagccatg 360
gcttatgacg gttatgctgc ctttgtaac ccctgctct attcatccat catgtcacc 420
acctctgtg tttggatggg actgggagcc tacatgactg gcctcactgc ttctttattc 480
caaattggtg ctttgcttca actccacttc tgtgggtcta atgtcatcag acatttcttc 540
tgtgacatgc cccaactgtt aatcttgctc tgtactgaca ctttcttgt acaggtcatg 600
actgctatat taaccatgtt ctttgggata gcaagtgcc tagttatcat gatatcctat 660
ggctatattg gcatctccat catgaagatc acttcagcta aaggcagtc aaaggcattc 720
aacacctgtg cttctcatct aacagctgtt tccctcttct atacatcagg aatctttgtc 780
tatttgaggt ccagctctgg aggttcttca agctttgaca gatttgcatc tgttttctac 840
actgtggtca ttcccatgtt aaatcccttg atttacagtt tgaggaacaa agaaattaa 900
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<210> 58

<211> 311

<212> PRT

<213> Homo sapiens

<400> 58

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Met Thr Gly Gly Gly Asn Ile Thr Glu Ile Thr Tyr Phe Ile Leu Leu
  1                      5                      10                      15

Gly Phe Ser Asp Phe Pro Arg Ile Ile Lys Val Leu Phe Thr Ile Phe
          20                      25                      30

Leu Val Ile Tyr Ile Thr Ser Leu Ala Trp Asn Leu Ser Leu Ile Val
          35                      40                      45

Leu Ile Arg Met Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
          50                      55                      60

Ser Asn Leu Ser Phe Ile Asp Val Cys Tyr Ile Ser Ser Thr Val Pro
          65                      70                      75                      80

Lys Met Leu Ser Asn Leu Leu Gln Glu Gln Gln Thr Ile Thr Phe Val
          85                      90                      95

Gly Cys Ile Ile Gln Tyr Phe Ile Phe Ser Thr Met Gly Leu Ser Glu
          100                      105                      110
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Ser Cys Leu Met Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
 115 120 125

Asn Pro Leu Leu Tyr Ser Ser Ile Met Ser Pro Thr Leu Cys Val Trp
 130 135 140

Met Val Leu Gly Ala Tyr Met Thr Gly Leu Thr Ala Ser Leu Phe Gln
 145 150 155 160

Ile Gly Ala Leu Leu Gln Leu His Phe Cys Gly Ser Asn Val Ile Arg
 165 170 175

His Phe Phe Cys Asp Met Pro Gln Leu Leu Ile Leu Ser Cys Thr Asp
 180 185 190

Thr Phe Phe Val Gln Val Met Thr Ala Ile Leu Thr Met Phe Phe Gly
 195 200 205

Ile Ala Ser Ala Leu Val Ile Met Ile Ser Tyr Gly Tyr Ile Gly Ile
 210 215 220

Ser Ile Met Lys Ile Thr Ser Ala Lys Gly Ser Pro Lys Ala Phe Asn
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Ala Val Ser Leu Phe Tyr Thr Ser Gly
 245 250 255

Ile Phe Val Tyr Leu Arg Ser Ser Ser Gly Gly Ser Ser Ser Phe Asp
 260 265 270

Arg Phe Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu Lys Arg
 290 295 300

Leu Gln Lys Arg Lys Cys Cys
 305 310

<210> 59

<211> 952

<212> DNA

<213> Homo sapiens

<400> 59

acttatgaaa gaggttcgag gcagaaatca aacagaagta acagaatttc tcctcttagg 60

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actttccgac aatccagatc tacaaggagt cctctttgca ttgtttctgt tgatctatat 120
ggcaaacatg gtgggcaatt tggggatgat tgtattgatt aagattgata tctgtctcca 180
caccgccatg tatttctttc tcagtagcct ctcttttgta gatgcctctt actcttcttc 240
cgtcactccc aagatgctgg tgaacctcat ggctgagaat aaggccattt cttttcatgg 300
atgtgctgcc cagttctact tctttggctc ctccctgggg actgagtgtc tcctgttggc 360
catgatggca tatgaccgct atgcagccat ttggaacccc ctgctctacc cagttctcgt 420
gtctgggaga atttgctttt tgctaatagc tacctccttc ttagcagggt gtggaaatgc 480
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cattgtgata atggcattct caagttttat tgtcatcagc tgtgttatga ttgtcctcat 660
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cttcatgtac ttgcgcccta catctagcta ctcaatggag caagacaagg ttgtctctgt 840
cttttataca gtaataatcc ctgtgctaaa tcccctcatc tatagttaa aaaataagga 900
tgtaaaaaag gccctaaaga agatcttatg gaaacacatc ttgtagagcc at 952

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<210> 60
<211> 313
<212> PRT
<213> Homo sapiens

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<400> 60
Met Lys Glu Val Arg Gly Arg Asn Gln Thr Glu Val Thr Glu Phe Leu
  1               5               10              15

Leu Leu Gly Leu Ser Asp Asn Pro Asp Leu Gln Gly Val Leu Phe Ala
    20              25              30

Leu Phe Leu Leu Ile Tyr Met Ala Asn Met Val Gly Asn Leu Gly Met
    35              40              45

Ile Val Leu Ile Lys Ile Asp Leu Cys Leu His Thr Pro Met Tyr Phe
    50              55              60

Phe Leu Ser Ser Leu Ser Phe Val Asp Ala Ser Tyr Ser Ser Ser Val
    65              70              75              80

Thr Pro Lys Met Leu Val Asn Leu Met Ala Glu Asn Lys Ala Ile Ser
    85              90              95

Phe His Gly Cys Ala Ala Gln Phe Tyr Phe Phe Gly Ser Phe Leu Gly
    100             105             110

Thr Glu Cys Phe Leu Leu Ala Met Met Ala Tyr Asp Arg Tyr Ala Ala
    115             120             125

Ile Trp Asn Pro Leu Leu Tyr Pro Val Leu Val Ser Gly Arg Ile Cys

```

130 135 140
 Phe Leu Leu Ile Ala Thr Ser Phe Leu Ala Gly Cys Gly Asn Ala Ala
 145 150 155 160
 Ile His Thr Gly Met Thr Phe Arg Leu Ser Phe Cys Gly Ser Asn Arg
 165 170 175
 Ile Asn His Phe Tyr Cys Asp Thr Pro Pro Leu Leu Lys Leu Ser Cys
 180 185 190
 Ser Asp Thr His Phe Asn Gly Ile Val Ile Met Ala Phe Ser Ser Phe
 195 200 205
 Ile Val Ile Ser Cys Val Met Ile Val Leu Ile Ser Tyr Leu Cys Ile
 210 215 220
 Phe Ile Ala Val Leu Lys Met Pro Ser Leu Glu Gly Arg His Lys Ala
 225 230 235 240
 Phe Ser Thr Cys Ala Ser Tyr Leu Met Ala Val Thr Ile Phe Phe Gly
 245 250 255
 Thr Ile Leu Phe Met Tyr Leu Arg Pro Thr Ser Ser Tyr Ser Met Glu
 260 265 270
 Gln Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile Ile Pro Val Leu
 275 280 285
 Asn Pro Leu Ile Tyr Ser Leu Lys Asn Lys Asp Val Lys Lys Ala Leu
 290 295 300
 Lys Lys Ile Leu Trp Lys His Ile Leu
 305 310

<210> 61

<211> 990

<212> DNA

<213> Homo sapiens

<400> 61

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 ctaggcaacc tgggcatgat aatgttaatg agactggact ctgccttca cagcccatg 180
 tactttcttc tactaaactt agcctttgtg gattttgtgct ataatcaaaa tgcaaccccg 240
 cagatgtoga ctaatatcgt atctgagaag accatttcct ttgctggttg ctttacacag 300
 tgctacattt tcattgccct tctactcact gagttttaca tgctggcagc aatggcctat 360

gaccgctatg tggccatata tgaccctctg cgctacagtg tgaaaacgtc caggagagtt 420
tgcattctgct tggccacatt tccctatgtc tatggcttct cagatggact cttccaggcc 480
atcctgacct tccgcctgac cttctgtaga tccagtgtca tcaaccactt ctactgtgct 540
gacccgccgc tcattaagct ttcttgttct gatacttatg tcaaagagca tgccatgttc 600
atatctgctg gcttcaacct ctccagctcc ctcaccatcg tcttggtgtc ctatgccttc 660
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gtgagtcggy tacttaatcc attgatctac agtctgagga ataaagatgt gaagcaggcc 900
ttgaagaatg tcttgagatg aaatattgtc atgaccatgg tgatgccttt gtttcctaatt 960
aaacattaaa tcgaaatctt tggctcacat 990

<210> 62

<211> 305

<212> PRT

<213> Homo sapiens

<400> 62

Met Ser Asn Thr Asn Gly Ser Ala Ile Thr Glu Phe Ile Leu Leu Gly
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Leu Thr Asp Cys Pro Glu Leu Gln Ser Leu Leu Phe Val Leu Phe Leu
20 25 30

Val Val Tyr Leu Val Thr Leu Leu Gly Asn Leu Gly Met Ile Met Leu
35 40 45

Met Arg Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Thr
50 55 60

Asn Leu Ala Phe Val Asp Leu Cys Tyr Thr Ser Asn Ala Thr Pro Gln
65 70 75 80

Met Ser Thr Asn Ile Val Ser Glu Lys Thr Ile Ser Phe Ala Gly Cys
85 90 95

Phe Thr Gln Cys Tyr Ile Phe Ile Ala Leu Leu Leu Thr Glu Phe Tyr
100 105 110

Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asp Pro
115 120 125

Leu Arg Tyr Ser Val Lys Thr Ser Arg Arg Val Cys Ile Cys Leu Ala
130 135 140

Thr Phe Pro Tyr Val Tyr Gly Phe Ser Asp Gly Leu Phe Gln Ala Ile
145 150 155 160

Leu Thr Phe Arg Leu Thr Phe Cys Arg Ser Ser Val Ile Asn His Phe
165 170 175

Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ser Cys Ser Asp Thr Tyr
180 185 190

Val Lys Glu His Ala Met Phe Ile Ser Ala Gly Phe Asn Leu Ser Ser
195 200 205

Ser Leu Thr Ile Val Leu Val Ser Tyr Ala Phe Ile Leu Ala Ala Ile
210 215 220

Leu Arg Ile Lys Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr Cys
225 230 235 240

Gly Ser His Met Met Ala Val Thr Leu Phe Tyr Gly Thr Leu Phe Cys
245 250 255

Met Tyr Ile Arg Pro Pro Thr Asp Lys Thr Val Glu Glu Ser Lys Ile
260 265 270

Ile Ala Val Phe Tyr Thr Phe Val Ser Pro Val Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Gln Ala Leu Lys Asn Val Leu
290 295 300

Arg
305

<210> 63
<211> 968
<212> DNA
<213> Homo sapiens

<400> 63
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gaaatagcac cctcatcgtg ttgatctgta atgactccca cctccacaca cccatgtatt 180
ttgtcgttgg aaatctgtcg tttctggatc tctggtattc ttctgtctac accccaaaga 240
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<210> 64

<211> 305

<212> PRT

<213> Homo sapiens

<400> 64

Met Gln Arg Ser Asn His Thr Val Thr Glu Phe Ile Leu Leu Gly Phe
 1 5 10 15
 Thr Thr Asp Pro Gly Met Gln Leu Gly Leu Phe Val Val Phe Leu Gly
 20 25 30
 Val Tyr Ser Leu Thr Val Val Gly Asn Ser Thr Leu Ile Val Leu Ile
 35 40 45
 Cys Asn Asp Ser His Leu His Thr Pro Met Tyr Phe Val Val Gly Asn
 50 55 60
 Leu Ser Phe Leu Asp Leu Trp Tyr Ser Ser Val Tyr Thr Pro Lys Ile
 65 70 75 80
 Leu Val Ile Cys Ile Ser Glu Asp Lys Ser Ile Ser Phe Ala Gly Cys
 85 90 95
 Leu Cys Gln Phe Phe Phe Ser Ala Gly Leu Ala Tyr Ser Glu Cys Cys
 100 105 110
 Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro
 115 120 125
 Leu Leu Tyr Ala Gln Ala Met Ser Ile Lys Leu Cys Ala Leu Leu Val
 130 135 140
 Ala Val Ser Tyr Cys Gly Gly Phe Ile Asn Ser Ser Ile Ile Thr Lys
 145 150 155 160
 Lys Thr Phe Ser Phe Asn Phe Cys Arg Glu Asn Ile Ile Asp Asp Phe
 165 170 175

Phe Cys Asp Leu Leu Pro Leu Val Glu Leu Ala Cys Gly Glu Lys Gly
180 185 190

Gly Tyr Lys Ile Met Met Tyr Phe Leu Leu Ala Ser Asn Val Ile Cys
195 200 205

Pro Ala Val Leu Ile Leu Ala Ser Tyr Leu Phe Ile Ile Thr Ser Val
210 215 220

Leu Arg Ile Ser Ser Ser Lys Gly Tyr Leu Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Leu Thr Ser Val Thr Leu Tyr Tyr Gly Ser Ile Leu Tyr
245 250 255

Ile Tyr Ala Leu Pro Arg Ser Ser Tyr Ser Phe Asp Met Asp Lys Ile
260 265 270

Val Ser Thr Phe Tyr Thr Val Val Phe Pro Met Leu Asn Leu Met Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu Leu
290 295 300

Pro
305

<210> 65
<211> 1000
<212> DNA
<213> Homo sapiens

<400> 65
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tttctcatca tttatgtcat cagcctctca ggcaacatca ttctgaattc tctcatctgt 180
gctgattctt ggccctacac acccatgtat ttcttctactg gaaaccggt ccttctggat 240
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aatatcattg atgatttctt ctgtgatctg cccccacttg taaagttggg gtgtgatgtg 600
aaggagcgct accaggctgt gctgcatttt atgcttgctt ccaatcatca ctccactgc 660
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ggtgcaatct tctttattta ctccaacca agaactagct atgccttaaa aatggataaa 840

ttgggggtcag tgttctatac tgtgggtgatt ccaatgctaa accccttgat ctatagctta 900
 agaaataagg atgtcaaaga tgccttgaag aaaatggttag atagacttca gtttcttaaa 960
 gaaaaatatt ggtaaacaaat ttttaacaga ttatctccac 1000

<210> 66
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 66
 Met Ile Leu Leu Asn Val Val Ser Ile Ile Arg Leu Leu Phe Leu Leu
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 Phe Ile Leu Leu Glu Phe Thr Glu Asp Leu Gly Leu Gln Gln Val Leu
 20 25 30
 Phe Phe Ile Phe Leu Ile Ile Tyr Val Ile Ser Leu Ser Gly Asn Ile
 35 40 45
 Ile Leu Asn Ser Leu Ile Cys Ala Asp Ser Trp Pro Tyr Thr Pro Met
 50 55 60
 Tyr Phe Phe Thr Gly Asn Arg Phe Leu Leu Asp Leu Trp Tyr Ser Ser
 65 70 75 80
 Val His Ile Pro Asp Ile Leu Leu Thr Cys Ile Ser Asp Asp Lys Thr
 85 90 95
 Ile Ser Phe Pro Gly Cys Leu Ala Gln Phe Phe Ser Ala Val Leu Ala
 100 105 110
 Leu Asn Glu Cys Tyr Met Met Ala Ser Met Ala Tyr Asp Arg Tyr Met
 115 120 125
 Ala Ile Ser Lys Pro Leu Leu Tyr Ser Trp Ala Thr Phe Pro Glu Leu
 130 135 140
 Cys Ala Ser Leu Val Glu Ala Ser His Leu Gly Gly Phe Val Asn Ser
 145 150 155 160
 Thr Ile Ile Thr Ser Glu Thr Pro Thr Leu Ser Phe Cys Gly Ser Asn
 165 170 175
 Ile Ile Asp Asp Phe Phe Cys Asp Leu Pro Pro Leu Val Lys Leu Val
 180 185 190
 Cys Asp Val Lys Glu Arg Tyr Gln Ala Val Leu His Phe Met Leu Ala

195	200	205
Ser Asn His His Ser His Cys Thr Tyr Ser Cys Val His Leu Phe Ile		
210	215	220
Ile Ala Ala Ile Ser Lys Ile Arg Ser Ile Lys Gly Arg Leu Gln Val		
225	230	235 240
Phe Ser Thr Cys Gly Ser Pro Leu Thr Ala Leu Thr Leu Tyr Tyr Gly		
	245	250 255
Ala Ile Phe Phe Ile Tyr Ser Gln Pro Arg Thr Ser Tyr Ala Leu Lys		
	260	265 270
Met Asp Lys Leu Gly Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu		
	275	280 285
Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Leu		
	290	295 300
Lys Lys Met Leu Asp Arg Leu Gln Phe Leu Lys Glu Lys Tyr Trp		
305	310	315

<210> 67
 <211> 1015
 <212> DNA
 <213> Homo sapiens

<400> 67

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ctctgggttg	gaacctgggg	atgattgaat	tgattctact	ggactcctgt	ctccacaccc	180
ccatgtactt	cttcctcagt	aacctctccc	tggtggactt	tggttattcc	tcagctgtca	240
ctcccaaggt	gatgggtggg	tttctcacag	gagacaaatt	catattatat	aatgcttgtg	300
ccacacaatt	cttcttcttt	gtagccttta	tactgcaga	aagtttcctc	ctggcatcaa	360
tggcctatga	ccgctatgca	gcattgtgta	aaccctgca	ttacaccacc	accatgacaa	420
caaatgtatg	tgcttgctg	gccataggct	cctacatctg	tggtttcctg	aatgcatcca	480
ttcatactgg	gaacactttc	aggctctcct	tctgtagatc	caatgtagtt	gaacactttt	540
tctgtgatgc	tcctcctctc	ttgactctct	catgttcaga	caactacatc	agtgagatgg	600
ttattttttt	tgtgggtggg	ttcaatgacc	tcttttctat	cctggtaatc	ttgatctcct	660
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tttctacttg	tgcttccac	cttactgcag	tttccatctt	ttatgggaca	ggaatcttta	780
tgtacttacg	acctaactcc	agccatttca	tgggcacaga	caaatggca	tctgtgttct	840
atgccatagt	cattcccatg	ttgaatccac	tggtctacag	cctgaggaac	aaagagggtta	900
agagtgcctt	taaaaagact	gtagggaagg	caaaggcctc	tataggattc	atattttaat	960
tataaagaat	tcacaataag	ataatttttt	ccacctcata	ttaatctttg	tctac	1015

<210> 68
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 68
 Met Glu Asn Asn Thr Glu Val Thr Glu Phe Ile Leu Val Gly Leu Thr
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 Asp Asp Pro Glu Leu Gln Ile Pro Leu Phe Ile Val Phe Leu Phe Ile
 20 25 30
 Tyr Leu Ile Thr Leu Val Gly Asn Leu Gly Met Ile Glu Leu Ile Leu
 35 40 45
 Leu Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Leu Val Asp Phe Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Met
 65 70 75 80
 Val Gly Phe Leu Thr Gly Asp Lys Phe Ile Leu Tyr Asn Ala Cys Ala
 85 90 95
 Thr Gln Phe Phe Phe Phe Val Ala Phe Ile Thr Ala Glu Ser Phe Leu
 100 105 110
 Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Leu Cys Lys Pro Leu
 115 120 125
 His Tyr Thr Thr Thr Met Thr Thr Asn Val Cys Ala Cys Leu Ala Ile
 130 135 140
 Gly Ser Tyr Ile Cys Gly Phe Leu Asn Ala Ser Ile His Thr Gly Asn
 145 150 155 160
 Thr Phe Arg Leu Ser Phe Cys Arg Ser Asn Val Val Glu His Phe Phe
 165 170 175
 Cys Asp Ala Pro Pro Leu Leu Thr Leu Ser Cys Ser Asp Asn Tyr Ile
 180 185 190
 Ser Glu Met Val Ile Phe Phe Val Val Gly Phe Asn Asp Leu Phe Ser
 195 200 205
 Ile Leu Val Ile Leu Ile Ser Tyr Leu Phe Ile Phe Ile Thr Ile Met
 210 215 220

Lys Met Arg Ser Pro Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala
 225 230 235 240

Ser His Leu Thr Ala Val Ser Ile Phe Tyr Gly Thr Gly Ile Phe Met
 245 250 255

Tyr Leu Arg Pro Asn Ser Ser His Phe Met Gly Thr Asp Lys Met Ala
 260 265 270

Ser Val Phe Tyr Ala Ile Val Ile Pro Met Leu Asn Pro Leu Val Tyr
 275 280 285

Ser Leu Arg Asn Lys Glu Val Lys Ser Ala Phe Lys Lys Thr Val Gly
 290 295 300

Lys Ala Lys Ala Ser Ile Gly Phe Ile Phe
 305 310

<210> 69

<211> 939

<212> DNA

<213> Homo sapiens

<400> 69

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ataataactga tggagaattg tacggaagtg acaaagttca ttcttctagg actaaccagt 60
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tgtgggaacc tggggatgat gttgctgata ctgatggact cttgtctcca caccatcatg 180
tactttttcc tcagtaacct gtctctgggtg gactttggat actcctcagc tgtcactccc 240
aaggatcatg ctgggttcc ttagaggagac aaggatcatc cctacaatgc atgtgctgtt 300
cagatgttct tctttgtagc cttggccacg gtggaaaatt acttgttggc ctcaatggcc 360
tatgaccgct atgcagcagt gtgcaaacc ctacactaca ccaccacat gacggccagt 420
gtaggtgcct gtctggccct aggtcatat gtctgtggct tctaaatgc ctcatccac 480
attgggggca tattcagtct ctctttctgt aaatccaatc tggtagatca ctttttctgt 540
gatgttccag cagtcattgc tctgtcttgc tctgataaac aactagtga ggtgattctg 600
gtttttatgt caagctttaa tatctttttt gttcttctag ttatctttat ctccacttg 660
ttcatattca tcaccatctt gaagatgcat tcagctaagg gacacaaaa agcattgtcc 720
acctgtgcct ctcaattcac tgcagtctcc gtcttctatg ggacagtaat cttcatctac 780
ttgagcccca gctccagcca ctccatggac acagacaaaa tggcatctgt gttctatgct 840
atgatcatcc ccatgctgaa ccctgtggtc tacagcctga ggaacagaga agtccagaat 900
gcattcaaga aagtgttgag aaggcaaaaa tttctataa 939

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<210> 70

<211> 309

<212> PRT

<213> Homo sapiens

<400> 70

Met Glu Asn Cys Thr Glu Val Thr Lys Phe Ile Leu Leu Gly Leu Thr
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Ser Val Pro Glu Leu Gln Ile Pro Leu Phe Ile Leu Phe Thr Phe Ile
20 25 30

Tyr Leu Leu Thr Leu Cys Gly Asn Leu Gly Met Met Leu Leu Ile Leu
35 40 45

Met Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Leu Val Asp Phe Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Met
65 70 75 80

Ala Gly Phe Leu Arg Gly Asp Lys Val Ile Ser Tyr Asn Ala Cys Ala
85 90 95

Val Gln Met Phe Phe Phe Val Ala Leu Ala Thr Val Glu Asn Tyr Leu
100 105 110

Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys Lys Pro Leu
115 120 125

His Tyr Thr Thr Thr Met Thr Ala Ser Val Gly Ala Cys Leu Ala Leu
130 135 140

Gly Ser Tyr Val Cys Gly Phe Leu Asn Ala Ser Phe His Ile Gly Gly
145 150 155 160

Ile Phe Ser Leu Ser Phe Cys Lys Ser Asn Leu Val His His Phe Phe
165 170 175

Cys Asp Val Pro Ala Val Met Ala Leu Ser Cys Ser Asp Lys His Thr
180 185 190

Ser Glu Val Ile Leu Val Phe Met Ser Ser Phe Asn Ile Phe Phe Val
195 200 205

Leu Leu Val Ile Phe Ile Ser Tyr Leu Phe Ile Phe Ile Thr Ile Leu
210 215 220

Lys Met His Ser Ala Lys Gly His Gln Lys Ala Leu Ser Thr Cys Ala
225 230 235 240

Ser His Phe Thr Ala Val Ser Val Phe Tyr Gly Thr Val Ile Phe Ile

Thr His Gln Pro Gly Leu Arg Ile Pro Leu Phe Phe Leu Phe Leu Gly
 20 25 30
 Phe Tyr Thr Val Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu Ile
 35 40 45
 Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe Asn
 50 55 60
 Leu Ser Leu Ile Asp Phe Cys Phe Ser Thr Thr Ile Thr Pro Lys Met
 65 70 75 80
 Leu Met Ser Phe Val Ser Arg Lys Asn Ile Ile Ser Phe Thr Gly Cys
 85 90 95
 Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Val Ser Glu Ser Phe
 100 105 110
 Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro
 115 120 125
 Leu Leu Tyr Thr Val Thr Met Ser Cys Gln Val Cys Leu Leu Leu Leu
 130 135 140
 Leu Gly Ala Tyr Gly Met Gly Phe Ala Gly Ala Met Ala His Thr Gly
 145 150 155 160
 Ser Ile Met Asn Leu Thr Phe Cys Ala Asp Asn Leu Val Asn His Phe
 165 170 175
 Met Cys Asp Ile Leu Pro Leu Leu Glu Leu Ser Cys Asn Ser Ser Tyr
 180 185 190
 Met Asn Glu Leu Val Val Phe Ile Val Val Ala Val Asp Val Gly Met
 195 200 205
 Pro Ile Val Thr Val Phe Ile Ser Tyr Ala Leu Ile Leu Ser Ser Ile
 210 215 220
 Leu His Asn Ser Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Ser Ser His Ile Ile Val Val Ser Leu Phe Phe Gly Ser Gly Ala Phe
 245 250 255
 Met Tyr Leu Lys Pro Leu Ser Ile Leu Pro Leu Glu Gln Gly Lys Val
 260 265 270

Ser Ser Leu Phe Tyr Thr Ile Ile Val Pro Val Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Arg Thr Leu
 290 295 300

Gly Arg Lys Ile Phe Ser
 305 310

<210> 73
 <211> 970
 <212> DNA
 <213> Homo sapiens

<400> 73
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 ttgcagggat tctccaatta tccagacctc caggagcttc tcttcggagc catcctgctc 120
 atctatgcca taacagtggg gggcaacttg ggaatgatgg cactcatctt cacagactcc 180
 catctccaaa gcccaatgta tttcttcctc aatgtcctct cgtttcttga tatttggtac 240
 tcttctgtgg tcacacctaa gctcttggtc aacttcctgg tctctgacaa gtccatctct 300
 tttgagggct gtgtggtcca gctcgcttc tttgtagtgc atgtgacagc tgagagcttc 360
 ctgctggcct ccatggccta tgaccgcttc ctagccatct gtcaaccctt ccattatggc 420
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 accgtgggtt tcacctatgt tcagcccat ggatctacta acaataccaa tggccaagta 840
 gtgtccgtct tctacacat cataattccc atgtcaatc cttcatcta tagcctccgc 900
 aacaaggagg tgaaggcgct tctgcagagg aagcttcagg tcaacatctt tcccggctga 960
 gccctgcaag 970

<210> 74
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 74
 Met Thr Pro Gly Glu Leu Ala Leu Ala Ser Gly Asn His Thr Pro Val
 1 5 10 15
 Thr Lys Phe Ile Leu Gln Gly Phe Ser Asn Tyr Pro Asp Leu Gln Glu
 20 25 30

Leu Leu Phe Gly Ala Ile Leu Leu Ile Tyr Ala Ile Thr Val Val Gly
 35 40 45
 Asn Leu Gly Met Met Ala Leu Ile Phe Thr Asp Ser His Leu Gln Ser
 50 55 60
 Pro Met Tyr Phe Phe Leu Asn Val Leu Ser Phe Leu Asp Ile Cys Tyr
 65 70 75 80
 Ser Ser Val Val Thr Pro Lys Leu Leu Val Asn Phe Leu Val Ser Asp
 85 90 95
 Lys Ser Ile Ser Phe Glu Gly Cys Val Val Gln Leu Ala Phe Phe Val
 100 105 110
 Val His Val Thr Ala Glu Ser Phe Leu Leu Ala Ser Met Ala Tyr Asp
 115 120 125
 Arg Phe Leu Ala Ile Cys Gln Pro Leu His Tyr Gly Ser Ile Met Thr
 130 135 140
 Arg Gly Thr Cys Leu Gln Leu Val Ala Val Ser Tyr Ala Phe Gly Gly
 145 150 155 160
 Ala Asn Ser Ala Ile Gln Thr Gly Asn Val Phe Ala Leu Pro Phe Cys
 165 170 175
 Gly Pro Asn Gln Leu Thr His Tyr Tyr Cys Asp Ile Pro Pro Leu Leu
 180 185 190
 His Leu Ala Cys Ala Asn Thr Ala Thr Ala Arg Val Val Leu Tyr Val
 195 200 205
 Phe Ser Ala Leu Val Thr Leu Leu Pro Ala Ala Val Ile Leu Thr Ser
 210 215 220
 Tyr Cys Leu Val Leu Val Ala Ile Gly Arg Met Arg Ser Val Ala Gly
 225 230 235 240
 Arg Glu Lys Asp Leu Ser Thr Cys Ala Ser His Phe Leu Ala Ile Ala
 245 250 255
 Ile Phe Tyr Gly Thr Val Val Phe Thr Tyr Val Gln Pro His Gly Ser
 260 265 270
 Thr Asn Asn Thr Asn Gly Gln Val Val Ser Val Phe Tyr Thr Ile Ile
 275 280 285

Ile Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Glu Val
 290 295 300

Lys Gly Ala Leu Gln Arg Lys Leu Gln Val Asn Ile Phe Pro Gly
 305 310 315

<210> 75
 <211> 1067
 <212> DNA
 <213> Homo sapiens

<400> 75
 gcccatgggt aactggactg cagcgggtgac tgagtttggt ctgctggggt tttccctgag 60
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 ggggaacctg ctcatcatct ccactgtgct gtctgctcc cgcctccaca ccccatgta 180
 cttcttcttg tgcaacctct ctatcctgga catcctcttc acctcagtea tctctccaaa 240
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 gtgctatttc tactttttct tgggcacagt tgagttcctc ctgctgacgg tcatgtccta 360
 tgaccgttat gccaccatct gctgccccct gcggtacacc accatcatga gaccttctgt 420
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 catcctcatc tcccagctgc cttctgtgg ctccaatata attaaccaact tcttctgtga 540
 cagtggaccc ttgctggccc tggcctgtgc agacaccact gccatcgagc tgatggattt 600
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 ctgtgcttcc cacctgacca tagtcatcat tctagtggc atcactgtgt ttatctatgt 780
 gactccctcc cagaaagaat atctggagat caacaagatc cctttgggtc tgagcagtgt 840
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 cctcagggat gtgtgggtca gggttcgagg agttttgaa aagaggatga gggcagtgt 960
 gagaagcaga ttatctcca acaaagacca ccaaggaagg gcttgcctt ctccaccatg 1020
 tgtctattct gtaaagctcc agtgtagaa agagaggagc tgcctta 1067

<210> 76
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 76
 Met Gly Asn Trp Thr Ala Ala Val Thr Glu Phe Val Leu Leu Gly Phe
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 Ser Leu Ser Arg Glu Val Glu Leu Leu Leu Leu Val Leu Leu Leu Pro
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 Thr Phe Leu Leu Thr Leu Leu Gly Asn Leu Leu Ile Ile Ser Thr Val
 35 40 45

Leu Ser Cys Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Asn
 50 55 60

Leu Ser Ile Leu Asp Ile Leu Phe Thr Ser Val Ile Ser Pro Lys Val
 65 70 75 80

Leu Ala Asn Leu Gly Ser Arg Asp Lys Thr Ile Ser Phe Ala Gly Cys
 85 90 95

Ile Thr Gln Cys Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Leu
 100 105 110

Leu Leu Thr Val Met Ser Tyr Asp Arg Tyr Ala Thr Ile Cys Cys Pro
 115 120 125

Leu Arg Tyr Thr Thr Ile Met Arg Pro Ser Val Cys Ile Gly Thr Val
 130 135 140

Val Phe Ser Trp Val Gly Gly Phe Leu Ser Val Leu Phe Pro Thr Ile
 145 150 155 160

Leu Ile Ser Gln Leu Pro Phe Cys Gly Ser Asn Ile Ile Asn His Phe
 165 170 175

Phe Cys Asp Ser Gly Pro Leu Leu Ala Leu Ala Cys Ala Asp Thr Thr
 180 185 190

Ala Ile Glu Leu Met Asp Phe Met Leu Ser Ser Met Val Ile Leu Cys
 195 200 205

Cys Ile Val Leu Val Ala Tyr Ser Tyr Thr Tyr Ile Ile Leu Thr Ile
 210 215 220

Val Arg Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Asn Thr Cys
 225 230 235 240

Ala Ser His Leu Thr Ile Val Ile Ile Pro Ser Gly Ile Thr Val Phe
 245 250 255

Ile Tyr Val Thr Pro Ser Gln Lys Glu Tyr Leu Glu Ile Asn Lys Ile
 260 265 270

Pro Leu Val Leu Ser Ser Val Val Thr Pro Phe Leu Asn Pro Phe Ile
 275 280 285

Tyr Thr Leu Arg Asn Asp Thr Val Gln Gly Val Leu Arg Asp Val Trp
 290 295 300

Val Arg Val Arg Gly Val Phe Glu Lys Arg Met Arg Ala Val Leu Arg
 305 310 315 320

Ser Arg Leu Ser Ser Asn Lys Asp His Gln Gly Arg Ala Cys Ser Ser
 325 330 335

Pro Pro Cys Val Tyr Ser Val Lys Leu Gln Cys
 340 345

<210> 77
 <211> 955
 <212> DNA
 <213> Homo sapiens

<400> 77
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 tgagggtccc catgtacttt tacctggcct atctgtcctt tattgatgcc tgctattcct 240
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 atggatgtat gactcaagtc tttggagaac attttttcgg aggtgttgag gtcacacctac 360
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 tcatgaagca gcatgtttgt agcctgctag tgggagtgtc atgggtagga ggctttcttc 480
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 aagccctctc cacctgtgtc tcccacatca cagttgtcat cttattcttt ataccctgca 780
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 aaaatgccat taggaaattg tgtagtagga aagctatttc aagtgtcaaa taaat 955

<210> 78
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 78
 Met Val Asn Arg Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Arg
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 Ile Gln Lys Cys Arg Lys Ser Tyr Leu Leu Cys Phe Val Ile Tyr Ile
 20 25 30
 Thr Thr Met Ile Gly Asn Val Leu Ile Val Val Thr Val Thr Ala Ser
 35 40 45

Pro Ser Leu Arg Ser Pro Met Tyr Phe Tyr Leu Ala Tyr Leu Ser Phe
 50 55 60

Ile Asp Ala Cys Tyr Ser Ser Val Asn Ala Pro Lys Leu Ile Thr Asp
 65 70 75 80

Ser Leu Tyr Glu Asn Lys Thr Ile Leu Leu Asn Gly Cys Met Thr Gln
 85 90 95

Val Phe Gly Glu His Phe Phe Gly Gly Val Glu Val Ile Leu Leu Thr
 100 105 110

Val Met Ala Tyr Asp Arg Tyr Val Val Ile Cys Lys Pro Leu His Tyr
 115 120 125

Thr Thr Ile Met Lys Gln His Val Cys Ser Leu Leu Val Gly Val Ser
 130 135 140

Trp Val Gly Gly Phe Leu His Ala Thr Val Gln Ile Leu Phe Ile Phe
 145 150 155 160

Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp His Phe Met Trp Asp
 165 170 175

Leu Asn Pro Leu Leu Asn Leu Val Cys Thr Asn Thr His Thr Leu Gly
 180 185 190

Leu Phe Val Ala Ala Asn Ser Gly Phe Ile Cys Leu Leu Asn Phe Leu
 195 200 205

Leu Leu Leu Val Ser Tyr Met Val Ile Leu Tyr Ser Leu Arg Thr His
 210 215 220

Ser Leu Glu Ala Arg Cys Lys Ala Leu Ser Thr Cys Val Ser His Ile
 225 230 235 240

Thr Val Val Ile Leu Phe Phe Ile Pro Cys Ile Phe Val Tyr Met Arg
 245 250 255

Pro Pro Ala Thr Leu Pro Ile Asp Lys Ala Val Ala Val Phe Tyr Thr
 260 265 270

Met Ile Ala Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Ala
 275 280 285

Gln Met Lys Asn Ala Ile Arg Lys Leu Cys Ser Arg Lys Ala Ile Ser
 290 295 300

Ser Val Lys
305

<210> 79
<211> 1052
<212> DNA
<213> Homo sapiens

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ggaatcacct gggccatagg tgccacgcac gctgcaatcc acacctccct caccttccgc 540
ctgctctact gtgggccttg ccacattgcc tacttcttct gcgacatacc ccctgtccta 600
aagctcgcct gtacagacac caccattaat gagctagtca tgcttgccag cattggcatc 660
gtggctgcag gctgcctcat cctcatcggt atttcctaca tcttcatcgt ggcagctgtg 720
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actggggtgc tcctgtacta cgtgccacct gtctgtatct acctgcagcc tcgctccagt 840
gaggcaggag ctggggcccc tgctgtcttc tacacaatcg taactccaat gctcaacca 900
ttcatttaca ctttgcgga caaggagggt aagcatgctc tgcaaaggct tttgtgcagc 960
agcttccgag agtctacagc aggcagccca ccccataggt ctgtgctatc aaaactcaca 1020
atttgctgc caggaaagca actattcaca tc 1052

<210> 80
<211> 331
<212> PRT
<213> Homo sapiens

<400> 80
Met Thr Ser Arg Ser Val Cys Glu Lys Met Thr Met Thr Thr Glu Asn
1 5 10 15
Pro Asn Gln Thr Val Val Ser His Phe Phe Leu Glu Gly Leu Arg Tyr
20 25 30
Thr Ala Lys His Ser Ser Leu Phe Phe Leu Leu Phe Leu Leu Ile Tyr
35 40 45
Ser Ile Thr Val Ala Gly Asn Leu Leu Ile Leu Leu Thr Val Gly Ser
50 55 60

Asp Ser His Leu Ser Leu Pro Met Tyr His Phe Leu Gly His Leu Ser
 65 70 75 80
 Phe Leu Asp Ala Cys Leu Ser Thr Val Thr Val Pro Lys Val Met Ala
 85 90 95
 Gly Leu Leu Thr Leu Asp Gly Lys Val Ile Ser Phe Glu Gly Cys Ala
 100 105 110
 Val Gln Leu Tyr Cys Phe His Phe Leu Ala Ser Thr Glu Cys Phe Leu
 115 120 125
 Tyr Thr Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln Pro Leu
 130 135 140
 His Tyr Pro Val Ala Met Asn Arg Arg Met Cys Ala Glu Met Ala Gly
 145 150 155 160
 Ile Thr Trp Ala Ile Gly Ala Thr His Ala Ala Ile His Thr Ser Leu
 165 170 175
 Thr Phe Arg Leu Leu Tyr Cys Gly Pro Cys His Ile Ala Tyr Phe Phe
 180 185 190
 Cys Asp Ile Pro Pro Val Leu Lys Leu Ala Cys Thr Asp Thr Thr Ile
 195 200 205
 Asn Glu Leu Val Met Leu Ala Ser Ile Gly Ile Val Ala Ala Gly Cys
 210 215 220
 Leu Ile Leu Ile Val Ile Ser Tyr Ile Phe Ile Val Ala Ala Val Leu
 225 230 235 240
 Arg Ile Arg Thr Ala Gln Gly Arg Gln Arg Ala Phe Ser Pro Cys Thr
 245 250 255
 Ala Gln Leu Thr Gly Val Leu Leu Tyr Tyr Val Pro Pro Val Cys Ile
 260 265 270
 Tyr Leu Gln Pro Arg Ser Ser Glu Ala Gly Ala Gly Ala Pro Ala Val
 275 280 285
 Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Phe Ile Tyr Thr Leu
 290 295 300
 Arg Asn Lys Glu Val Lys His Ala Leu Gln Arg Leu Leu Cys Ser Ser
 305 310 315 320

Phe Arg Glu Ser Thr Ala Gly Ser Pro Pro Pro
 325 330

<210> 81
 <211> 1006
 <212> DNA
 <213> Homo sapiens

<400> 81
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 attgtgctgg gaaatcttct cattatcttc acagtgactt ctgataccag cctgcactcc 180
 cctatgtact ttctcttggg aaacctttcc ttgttgaca ttgttcaggc ttcttttgct 240
 acccctaaaa tgattgcaga ttttctgagt gcacacgaga ccatactttt cagtggctgc 300
 atagcccaaa ttttctttat tcaccttttt actggagggg agatgggtgct acttgtttcg 360
 atggcctatg acagggtatgt agccatatgc aaaccttat actatgtggt catcatgagc 420
 cgaaggacat gcactgtctt ggtaatgac tcctgggctg tgagcttggg gcacacatta 480
 agccagttat catttactgt gaacctgcct ttttgtggac ctaatgtagt agacagcttt 540
 ttttgtgac ttctctgagt caccaaactt gcctgcctgg actcttacat cattgaaata 600
 ctaattgtgg tcaatagtgg aattctttcc ctaagcactt tctctctctt ggtcagctcc 660
 tacatcatta ttcttggtac agtttggtc aagtccttcag ctgcaatggc aaaggcattt 720
 tctacgctgg ctcccatat tgcagtagta atattattct ttggaccttg catcttcac 780
 tatgtgtggc cctttaccat ctctcctttg gataaatttc ttgccatatt ttacactggt 840
 ttcacccccg tcctaaacct cattatttat aactaagga atagggatat gaaggctgcc 900
 gtaaggaaaa ttgtgaacca ttacctgagg ccaaggagaa tttctgaaat gtcactagta 960
 gtgagaactt cctttcatta agacaaaact cttcctaatt cctcag 1006

<210> 82
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 82
 Met Asp Lys Ser Asn Ser Ser Val Val Ser Glu Phe Val Leu Leu Gly
 1 5 10 15
 Leu Cys Ser Ser Gln Lys Leu Gln Leu Phe Tyr Phe Cys Phe Phe Ser
 20 25 30
 Val Leu Tyr Thr Val Ile Val Leu Gly Asn Leu Leu Ile Ile Leu Thr
 35 40 45
 Val Thr Ser Asp Thr Ser Leu His Ser Pro Met Tyr Phe Leu Leu Gly
 50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Gln Ala Ser Phe Ala Thr Pro Lys
 65 70 75 80

Met Ile Ala Asp Phe Leu Ser Ala His Glu Thr Ile Ser Phe Ser Gly
 85 90 95

Cys Ile Ala Gln Ile Phe Phe Ile His Leu Phe Thr Gly Gly Glu Met
 100 105 110

Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125

Pro Leu Tyr Tyr Val Val Ile Met Ser Arg Arg Thr Cys Thr Val Leu
 130 135 140

Val Met Ile Ser Trp Ala Val Ser Leu Val His Thr Leu Ser Gln Leu
 145 150 155 160

Ser Phe Thr Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser
 165 170 175

Phe Phe Cys Asp Leu Pro Arg Val Thr Lys Leu Ala Cys Leu Asp Ser
 180 185 190

Tyr Ile Ile Glu Ile Leu Ile Val Val Asn Ser Gly Ile Leu Ser Leu
 195 200 205

Ser Thr Phe Ser Leu Leu Val Ser Ser Tyr Ile Ile Ile Leu Val Thr
 210 215 220

Val Trp Leu Lys Ser Ser Ala Ala Met Ala Lys Ala Phe Ser Thr Leu
 225 230 235 240

Ala Ser His Ile Ala Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255

Ile Tyr Val Trp Pro Phe Thr Ile Ser Pro Leu Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Tyr Thr Val Phe Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr
 275 280 285

Leu Arg Asn Arg Asp Met Lys Ala Ala Val Arg Lys Ile Val Asn His
 290 295 300

Tyr Leu Arg Pro Arg Arg Ile Ser Glu Met Ser Leu Val Val Arg Thr
 305 310 315 320

Ser Phe His

<210> 83

<211> 1032

<212> DNA

<213> Homo sapiens

<400> 83

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attgtgctgg gaaatcttct cattatcctc acagtgaactt ctgataccag cctgcactcc 180
cctatgtact ttctcttggg aaacctttcc tttgttgaca tttgtcaggc ttcttttgct 240
accttaaaaa tgattgcaga tttctgagt gcacacgaga ccatatcttt cagtggctgc 300
atagcccaaa ttttctttat tcacctttt actggagggg agatggtgct acttgtttcg 360
atggcctatg acaggatagt agccatatgc aaacctttat actatgtggt catcatgagc 420
cgaaggacat gcactgtctt ggtaatgatc tcctgggctg tgagcttggt gcacacatta 480
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ttttgtgatc ttctctgagt caccaaactt gcctgcctgg actcttacat cattgaaata 600
ctaattgtgg tcaatagtgg aattctttcc ctaagcaact tctctctctt ggtcagctcc 660
tacatcatta ttcttgttac agtttgctc aagtcttcag ctgcaatggc aaaggcattt 720
tctacgctgg cttcccatat tgcagtagta atattattct ttggaccttg catcttcac 780
tatgtgtggc cttttaccat ctctccttg gataaatttc ttgccatatt ttacactgtt 840
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gtaaggaaaa ttgtgaacca ttacctgagg ccaaggagaa tttctgaaat gtcactagta 960
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<210> 84

<211> 323

<212> PRT

<213> Homo sapiens

<400> 84

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Met Asp Lys Ser Asn Ser Ser Val Val Ser Glu Phe Val Leu Leu Gly
  1              5              10              15

Leu Cys Ser Ser Gln Lys Leu Gln Leu Phe Tyr Phe Cys Phe Phe Ser
      20              25              30

Val Leu Tyr Thr Val Ile Val Leu Gly Asn Leu Leu Ile Ile Leu Thr
      35              40              45

Val Thr Ser Asp Thr Ser Leu His Ser Pro Met Tyr Phe Leu Leu Gly
      50              55              60
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Asn Leu Ser Phe Val Asp Ile Cys Gln Ala Ser Phe Ala Thr Pro Lys
 65 70 75 80

Met Ile Ala Asp Phe Leu Ser Ala His Glu Thr Ile Ser Phe Ser Gly
 85 90 95

Cys Ile Ala Gln Ile Phe Phe Ile His Leu Phe Thr Gly Gly Glu Met
 100 105 110

Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125

Pro Leu Tyr Tyr Val Val Ile Met Ser Arg Arg Thr Cys Thr Val Leu
 130 135 140

Val Met Ile Ser Trp Ala Val Ser Leu Val His Thr Leu Ser Gln Leu
 145 150 155 160

Ser Phe Thr Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser
 165 170 175

Phe Phe Cys Asp Leu Pro Arg Val Thr Lys Leu Ala Cys Leu Asp Ser
 180 185 190

Tyr Ile Ile Glu Ile Leu Ile Val Val Asn Ser Gly Ile Leu Ser Leu
 195 200 205

Ser Thr Phe Ser Leu Leu Val Ser Ser Tyr Ile Ile Ile Leu Val Thr
 210 215 220

Val Trp Leu Lys Ser Ser Ala Ala Met Ala Lys Ala Phe Ser Thr Leu
 225 230 235 240

Ala Ser His Ile Ala Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255

Ile Tyr Val Trp Pro Phe Thr Ile Ser Pro Leu Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Tyr Thr Val Phe Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr
 275 280 285

Leu Arg Asn Arg Asp Met Lys Ala Ala Val Arg Lys Ile Val Asn His
 290 295 300

Tyr Leu Arg Pro Arg Arg Ile Ser Glu Met Ser Leu Val Val Arg Thr
 305 310 315 320

Ser Phe His

<210> 85

<211> 968

<212> DNA

<213> Homo sapiens

<400> 85

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catgaataac tcacagatat ctactgtgac gcagtttgtg ttgttggggt ttcttgggtcc 60
ctggaaaatt cagatcatct ttttctcaat gattttgttg gtctacatct tcaactctgac 120
tgggaatatg gccatcatct gtgcagttag gtgggacatc cgactccata cccctatgta 180
cgtgctccta gccaaattct ccttcctaga gatctggtat gtgacctgca cagtcccca 240
catgctggta aattttttct ccaaaactaa gaccatatca ttctctggat gtttcaactca 300
gttccacttc ttcttttccc tgggcacaac tgaatgcttc ttctctgtg tcatggctta 360
tgatcggtac ctggccatct gccacccact gcactatccc tcattatga ctggccagct 420
ctgtggcatc ttggtgtctc tttgttggct cattggttcc cttggacatt caatttccat 480
tttcttcatt tttcaactac ctttctgtgg tcccaacatc attgatcatt ttctgtgtga 540
ttagagacca ctgatggcat tgtcctctgc ccctactcac atcatagggc atgtgttcca 600
ttctgtgagc tctcttttca tcaacctcac catggtgtac atccttgggt cctatacctt 660
ggtgctcaga actgtgctta aggttccttc ttcagctgga tggcaaaagg ccatctctac 720
ctgtgggtca cacttggttg ttgtgtctct gttctatgga gccataatgc tgatgtatgt 780
gagtcccaca cctggcaact cagttgctat gcataagctc atcacactga tatattctgt 840
ggtaacacct gtcttaaacc ccctcatcta cagcctacgc aacaaggaca tgaaatatgc 900
cctccatcat gtcttctgtg gaatgagaat tatccagaga tcatgaatag ggttttttat 960
aaccacaat
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<210> 86

<211> 314

<212> PRT

<213> Homo sapiens

<400> 86

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Met Asn Asn Ser Gln Ile Ser Thr Val Thr Gln Phe Val Leu Leu Gly
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Phe Pro Gly Pro Trp Lys Ile Gln Ile Ile Phe Phe Ser Met Ile Leu
      20                      25                      30

Leu Val Tyr Ile Phe Thr Leu Thr Gly Asn Met Ala Ile Ile Cys Ala
      35                      40                      45

Val Arg Trp Asp His Arg Leu His Thr Pro Met Tyr Val Leu Leu Ala
      50                      55                      60

Asn Phe Ser Phe Leu Glu Ile Trp Tyr Val Thr Cys Thr Val Pro Asn
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65		70		75		80									
Met	Leu	Val	Asn	Phe	Phe	Ser	Lys	Thr	Lys	Thr	Ile	Ser	Phe	Ser	Gly
			85						90					95	
Cys	Phe	Thr	Gln	Phe	His	Phe	Phe	Phe	Ser	Leu	Gly	Thr	Thr	Glu	Cys
			100					105					110		
Phe	Phe	Leu	Cys	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Leu	Ala	Ile	Cys	His
			115					120					125		
Pro	Leu	His	Tyr	Pro	Ser	Ile	Met	Thr	Gly	Gln	Leu	Cys	Gly	Ile	Leu
			130				135					140			
Val	Ser	Leu	Cys	Trp	Leu	Ile	Gly	Phe	Leu	Gly	His	Ser	Ile	Ser	Ile
145						150				155					160
Phe	Phe	Ile	Phe	Gln	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Ile	Ile	Asp	His
				165					170						175
Phe	Leu	Cys	Asp	Val	Asp	Pro	Leu	Met	Ala	Leu	Ser	Ser	Ala	Pro	Thr
			180					185						190	
His	Ile	Ile	Gly	His	Val	Phe	His	Ser	Val	Ser	Ser	Leu	Phe	Ile	Asn
			195				200					205			
Leu	Thr	Met	Val	Tyr	Ile	Leu	Gly	Ser	Tyr	Thr	Leu	Val	Leu	Arg	Thr
			210				215					220			
Val	Leu	Lys	Val	Pro	Ser	Ser	Ala	Gly	Trp	Gln	Lys	Ala	Ile	Ser	Thr
225					230					235					240
Cys	Gly	Ser	His	Leu	Val	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala	Ile	Met
				245					250					255	
Leu	Met	Tyr	Val	Ser	Pro	Thr	Pro	Gly	Asn	Ser	Val	Ala	Met	His	Lys
			260					265					270		
Leu	Ile	Thr	Leu	Ile	Tyr	Ser	Val	Val	Thr	Pro	Val	Leu	Asn	Pro	Leu
			275				280						285		
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Met	Lys	Tyr	Ala	Leu	His	His	Val
			290			295					300				
Phe	Cys	Gly	Met	Arg	Ile	Ile	Gln	Arg	Ser						
305					310										

<210> 87
 <211> 964
 <212> DNA
 <213> Homo sapiens

<400> 87
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 tccctggaaa tttcctcatc attttcacca taaagtcaga ccctgggctc acagccccc 180
 tctatttctt tctgggcaac ttggccttac tggatgcac ctactccttc attgtggttc 240
 ccaggatggt ggtggacttc ctctctgaga agaaggtaat ctctataga agctgcatca 300
 ctcagctctt tttcttgcac tttcttgag cgggagagat gttcctcctc gttgtgatgg 360
 cctttgaccg ctacatcgcc atctgccggc ctttacctt ttcaaccatc atgaacccta 420
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 tggctctcaa cagtggcctg ctcagcctcc tgtgcttctt gggccttctg gcctcctatg 660
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 ttcctttgat gaaccctggt atttatacgc ttcgcaacca ggaggtgaaa gcttccatga 900
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 gaaa 964

<210> 88
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 88
 Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
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 Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu
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 Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
 35 40 45
 Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ala Leu Leu Asp Ala Ser Tyr Ser Phe Ile Val Val Pro Arg
 65 70 75 80
 Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Ser
 85 90 95

Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Ala Gly Glu Met
 100 105 110
 Phe Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Ser Thr Ile Met Asn Pro Arg Ala Cys Tyr Ala Leu
 130 135 140
 Ser Leu Val Leu Trp Leu Gly Gly Phe Ile His Ser Ile Val Gln Val
 145 150 155 160
 Ala Leu Ile Leu His Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175
 Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asn Thr
 180 185 190
 Phe Val Val Glu Leu Leu Met Val Ser Asn Ser Gly Leu Leu Ser Leu
 195 200 205
 Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg
 210 215 220
 Ile Arg Glu His Ser Ser Glu Gly Lys Ser Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Thr His Ile Ile Ile Ile Phe Leu Met Phe Gly Pro Ala Ile Phe
 245 250 255
 Ile Tyr Thr Cys Pro Phe Gln Ala Phe Pro Ala Asp Lys Val Val Ser
 260 265 270
 Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Val Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Val Lys Ala Ser Met Arg Lys Leu Leu Ser Gln
 290 295 300
 His Met Phe Cys
 305

<210> 89
 <211> 964
 <212> DNA
 <213> Homo sapiens

<400> 89

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aaattatgga aacacagaac ctacagtggt tgacagaatt cattcttctt ggtctgaccc 60
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tccctggaaa ttctctcatc attttcacca taaagtcaga ccctgggctc acagccccc 180
tctatttctt tctgggcaac ttggccttac tggatgcac ctactccttc attgtgggtc 240
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gagcctgcta tgcattatcg ttggttctgt ggcttggggg ctttatccat tccattgtac 480
aagtagccct tatcctgcac ttgccttct gtggccaaa ccagctcgat aacttcttct 540
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tgggtctcaa cagtggcctg ctacagcctc tgtgcttctt ggccttctg gcctcctatg 660
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<210> 90

<211> 308

<212> PRT

<213> Homo sapiens

<400> 90

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Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
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Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu
      20              25             30

Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
      35              40             45

Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
      50              55             60

Asn Leu Ala Leu Leu Asp Ala Ser Tyr Ser Phe Ile Val Val Pro Arg
      65              70             75             80

Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Ser
      85              90             95

Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Ala Gly Glu Met
      100             105             110
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Phe Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125

Pro Leu His Tyr Ser Thr Ile Met Asn Pro Arg Ala Cys Tyr Ala Leu
 130 135 140

Ser Leu Val Leu Trp Leu Gly Gly Phe Ile His Ser Ile Val Gln Val
 145 150 155 160

Ala Leu Ile Leu His Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175

Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asn Thr
 180 185 190

Phe Val Val Glu Leu Leu Met Val Ser Asn Ser Gly Leu Leu Ser Leu
 195 200 205

Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg
 210 215 220

Ile Arg Glu His Ser Ser Glu Gly Lys Ser Lys Ala Ile Ser Thr Cys
 225 230 235 240

Thr Thr His Ile Ile Ile Ile Phe Leu Met Phe Gly Pro Ala Ile Phe
 245 250 255

Ile Tyr Thr Cys Pro Phe Gln Ala Phe Pro Ala Asp Lys Val Val Ser
 260 265 270

Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Val Ile Tyr Thr
 275 280 285

Leu Arg Asn Gln Glu Val Lys Ala Ser Met Arg Lys Leu Leu Ser Gln
 290 295 300

His Met Phe Cys
 305

<210> 91
 <211> 977
 <212> DNA
 <213> Homo sapiens

<400> 91
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atgtacctgt tcaccttggt ggagaatttg gccatcattt tagtgggtggg tttggaccac 180
 cgactacgga gacccatgta tttcttcctg acacacttgt cctgccttga aatctggtac 240
 acttctgtta cagtgcccaa gatgctggct gggtttattg ggggtggatgg tggcaagaat 300
 atctcttatg ctggttgccat atcccagctc ttcacattca cctttcttgg ggcaactgag 360
 tgtttcctac tggctgccat ggccatgat cggtatgtgg ccatttgtat gcctctccac 420
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 aagggtggtat ctgtcttcta ctctgttctc acgcccagtc tcaatcctct catctacagt 900
 ctttaggaaca aggaagtga gggagctctg ggtcgagtct tttctctcaa cttttggaag 960
 ggacagtgag gaggcag 977

<210> 92
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 92
 Met Gln Pro Tyr Thr Lys Asn Trp Thr Gln Val Thr Glu Phe Val Met
 1 5 10 15
 Met Gly Phe Ala Gly Ile His Glu Ala His Leu Leu Phe Phe Ile Leu
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 Phe Leu Thr Met Tyr Leu Phe Thr Leu Val Glu Asn Leu Ala Ile Ile
 35 40 45
 Leu Val Val Gly Leu Asp His Arg Leu Arg Arg Pro Met Tyr Phe Phe
 50 55 60
 Leu Thr His Leu Ser Cys Leu Glu Ile Trp Tyr Thr Ser Val Thr Val
 65 70 75 80
 Pro Lys Met Leu Ala Gly Phe Ile Gly Val Asp Gly Gly Lys Asn Ile
 85 90 95
 Ser Tyr Ala Gly Cys Leu Ser Gln Leu Phe Ile Phe Thr Phe Leu Gly
 100 105 110
 Ala Thr Glu Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val
 115 120 125
 Ala Ile Cys Met Pro Leu His Tyr Gly Ala Phe Val Ser Trp Gly Thr

130		135		140
Cys Ile Arg Leu Ala Ala Ala Cys Trp Leu Val Gly Phe Leu Thr Pro				
145		150		155 160
Ile Leu Pro Ile Tyr Leu Leu Ser Gln Leu Thr Phe Cys Gly Pro Asn				
	165		170	175
Val Ile Asp His Phe Ser Cys Asp Ala Ser Pro Leu Leu Ala Leu Ser				
	180		185	190
Cys Ser Asp Val Thr Trp Lys Glu Thr Val Asp Phe Leu Val Ser Leu				
	195		200	205
Ala Val Leu Leu Ala Ser Ser Met Val Ile Ala Val Ser Tyr Gly Asn				
	210		215	220
Ile Val Trp Thr Leu Leu His Ile Arg Ser Ala Ala Glu Arg Trp Lys				
225		230		235 240
Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ser Leu Phe Tyr				
	245		250	255
Gly Thr Leu Phe Phe Met Tyr Val Gln Thr Lys Val Thr Ser Ser Ile				
	260		265	270
Asn Phe Asn Lys Val Val Ser Val Phe Tyr Ser Val Val Thr Pro Met				
	275		280	285
Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Gly Ala				
	290		295	300
Leu Gly Arg Val Phe Ser Leu Asn Phe Trp Lys Gly Gln				
305		310		315

<210> 93

<211> 962

<212> DNA

<213> Homo sapiens

<400> 93

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acccccatgt actttttcct cagacacttg gctattatta atctttgcaa ttctactgtc 240
gttgccccta aaatgctggt taacttcctg gttaccaaga aaaccatata atactatgga 300
tgtgcagccc aactgggtgg attcttggtt ttcatgtggt ctgagatttt cacgctggct 360

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gcaatggcct atgaccgcta tgtggctatt tggagccctc tgcctctacgc cgtagtgggtg 420
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ctgactgtct ctctctgtgt gttctctgtg tcatactgtt cttccaacat tatcaacat 540
ttttactgtg atgatgtccc ttgctagca ttgtcctgtt ctgataccta cattccagaa 600
acagcagtct ttatcttttc agggaccaac ttgcttttct ccatgatcgt tgttctgata 660
tctacttca acattgttat taccattttg aggatacgtt cctcagaagg acgacaaaaa 720
gccttttcca cctgtgcttc tcacatgata gctgtgggtg tgttctatgg gactctcctt 780
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ttctacaccc tggtgatacc agtgcgaac cctctaattc acagcctcag gaacaagaac 900
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<210> 94

<211> 315

<212> PRT

<213> Homo sapiens

<400> 94

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Met Ala Ser Gly Asn Leu Thr Trp Val Thr Glu Phe Ile Leu Val Gly
  1             5             10             15

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```

Val Ser Asp Asp Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu
      20             25             30

```

```

Val Leu Tyr Leu Leu Thr Val Ala Gly Asn Leu Gly Ile Ile Thr Leu
      35             40             45

```

```

Thr Ser Val Asp Pro Gln Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg
      50             55             60

```

```

His Leu Ala Ile Ile Asn Leu Cys Asn Ser Thr Val Val Ala Pro Lys
      65             70             75             80

```

```

Met Leu Val Asn Phe Leu Val Thr Lys Lys Thr Ile Ser Tyr Tyr Gly
      85             90             95

```

```

Cys Ala Ala Gln Leu Gly Gly Phe Leu Val Phe Ile Val Ala Glu Ile
      100            105            110

```

```

Phe Thr Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Trp Ser
      115            120            125

```

```

Pro Leu Leu Tyr Ala Val Val Val Ser Pro Lys Val Cys Arg Leu Leu
      130            135            140

```

```

Val Ser Leu Thr Tyr Leu Gln Ser Leu Ile Thr Ala Leu Thr Val Ser
      145            150            155            160

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Ser Cys Val Phe Ser Val Ser Tyr Cys Ser Ser Asn Ile Ile Asn His
165 170 175

Phe Tyr Cys Asp Asp Val Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
180 185 190

Tyr Ile Pro Glu Thr Ala Val Phe Ile Phe Ser Gly Thr Asn Leu Leu
195 200 205

Phe Ser Met Ile Val Val Leu Ile Ser Tyr Phe Asn Ile Val Ile Thr
210 215 220

Ile Leu Arg Ile Arg Ser Ser Glu Gly Arg Gln Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Met Ile Ala Val Val Val Phe Tyr Gly Thr Leu Leu
245 250 255

Phe Met Tyr Leu Gln Pro Arg Ser Asn His Ser Leu Asp Thr Asp Lys
260 265 270

Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Val Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asn Val Lys Asp Ala Leu Lys Arg Phe
290 295 300

Leu Asp Asn Pro Cys Arg Ser Leu Lys Leu Met
305 310 315

<210> 95

<211> 974

<212> DNA

<213> Homo sapiens

<400> 95

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atggggatta cagacaaccc tgggctgcag gctccactgt ttggactctt cctcatcata 120
tatctgggtca cagtgatagg caatctgggc atggttatct tgacctactt ggactccaag 180
ctacacaccc ccatgtactt tttccttaga cattttgtcaa tcaactgatct tggttactcc 240
actgtcattg ccccgaagat gttagtaaac ttcatagtgc acaaaaacac aatttctttac 300
aattgggatg ccactcagct agcattcttt gagattttca tcatctctga gctctttatt 360
ctatcagcaa tggcctatga tcgctacgta gccatctgta aacctcttct gtacgtgatc 420
atcatggcag agaaagtact ttgggtgctg gtaattgttc cctatctcta tagcacgttt 480
gtgtcaactat ttctcacaat taagttattt aaactgtcct tctgtggctc aaacataatc 540
agctattttt actgtgactg tatccctctg atgtccatac tctgttctga cacaaatgaa 600

ttagaattaa taattttgat cttctcaggc tgtaatttgc tcttctccct ctcaattgtt 660
 ctcatatcct acatgtttat tctagtggcc attctcagaa tgaactcaag gaaagggagg 720
 tacaaagcct tctccacctg tagctctcat ctgacagtgg tgatcatgtt ctatgggaca 780
 ttgttattta tttacttgca acccaagtcc agtcatactt tggctattga taaaatggcc 840
 tcagtgtttt ataccctgtt gattcctatg ctgaatccgt tgatctacag cctaaggaac 900
 aaagaagtaa aagatgctct aaagagaact ttaaccaatc gattcaaaat tcccatttaa 960
 tatcttaata ctca 974

<210> 96
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 96
 Met Asn His Val Val Lys His Asn His Thr Ala Val Thr Lys Val Thr
 1 5 10 15
 Glu Phe Ile Leu Met Gly Ile Thr Asp Asn Pro Gly Leu Gln Ala Pro
 20 25 30
 Leu Phe Gly Leu Phe Leu Ile Ile Tyr Leu Val Thr Val Ile Gly Asn
 35 40 45
 Leu Gly Met Val Ile Leu Thr Tyr Leu Asp Ser Lys Leu His Thr Pro
 50 55 60
 Met Tyr Phe Phe Leu Arg His Leu Ser Ile Thr Asp Leu Gly Tyr Ser
 65 70 75 80
 Thr Val Ile Ala Pro Lys Met Leu Val Asn Phe Ile Val His Lys Asn
 85 90 95
 Thr Ile Ser Tyr Asn Trp Tyr Ala Thr Gln Leu Ala Phe Phe Glu Ile
 100 105 110
 Phe Ile Ile Ser Glu Leu Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg
 115 120 125
 Tyr Val Ala Ile Cys Lys Pro Leu Leu Tyr Val Ile Ile Met Ala Glu
 130 135 140
 Lys Val Leu Trp Val Leu Val Ile Val Pro Tyr Leu Tyr Ser Thr Phe
 145 150 155 160
 Val Ser Leu Phe Leu Thr Ile Lys Leu Phe Lys Leu Ser Phe Cys Gly
 165 170 175

Ser Asn Ile Ile Ser Tyr Phe Tyr Cys Asp Cys Ile Pro Leu Met Ser
 180 185 190
 Ile Leu Cys Ser Asp Thr Asn Glu Leu Glu Leu Ile Ile Leu Ile Phe
 195 200 205
 Ser Gly Cys Asn Leu Leu Phe Ser Leu Ser Ile Val Leu Ile Ser Tyr
 210 215 220
 Met Phe Ile Leu Val Ala Ile Leu Arg Met Asn Ser Arg Lys Gly Arg
 225 230 235 240
 Tyr Lys Ala Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Ile Met
 245 250 255
 Phe Tyr Gly Thr Leu Leu Phe Ile Tyr Leu Gln Pro Lys Ser Ser His
 260 265 270
 Thr Leu Ala Ile Asp Lys Met Ala Ser Val Phe Tyr Thr Leu Leu Ile
 275 280 285
 Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
 290 295 300
 Asp Ala Leu Lys Arg Thr Leu Thr Asn Arg Phe Lys Ile Pro Ile
 305 310 315

<210> 97

<211> 1004

<212> DNA

<213> Homo sapiens

<400> 97

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 attactatgc tgggcaatgt ggggatgata ttgataatcc gcctggacct ccagcttcac 180
 actcccatgt attttttcct tactcacttg tcattttattg acctcagtta ctcaactgtc 240
 atcacaccta aaaccttagc gaacttactg acttccaact atatttcctt catgggctgc 300
 tttgcccaga tgttcttttt tgtcttcttg ggagctgctg aatgttttct tctctcatca 360
 atggcctatg atcgctacgt agctatctgc agtcctctac gttaccaggt tattatgtcc 420
 aaaaggctgt gttgcgctct tgtcactggg ccctatgtga ttagctttat caactccttt 480
 gtcaatgtgg tttggatgag cagactgcat ttctgcgact caaatgtagt tcgtcacttt 540
 ttctgcgaca cgtctccaat ttagctctg tcttgcgact acacatacga cattgaaatc 600
 atgatacaca ttttagctgg ttccaccctg atgggtgtccc ttatcacaat atctgcatcc 660
 tatgtgtcca ttctctctac catcctgaaa attaattcca cttcaggaaa gcagaaagct 720
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 acttatttaa aaccaagaaa gtcttattct ttgggaaggg atcaagtggc ttctgttttt 840

tatactattg tgattcccat gctgaatcca ctcattttata gtcttagaaa caaagaagtt 900
 aaaaatgctc tcattagagt catgcagaga agacaggact ccaggtaatt aaaatagcag 960
 gaatgctgaa catttaaact catcttttct ttcttttcta ttg 1004

<210> 98
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 98
 Met Gly Arg Arg Asn Asn Thr Asn Val Pro Asp Phe Ile Leu Thr Gly
 1 5 10 15
 Leu Ser Asp Ser Glu Glu Val Gln Met Ala Leu Phe Ile Leu Phe Leu
 20 25 30
 Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Ile Leu Ile
 35 40 45
 Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60
 His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Ile Thr Pro Lys
 65 70 75 80
 Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Met Gly Cys
 85 90 95
 Phe Ala Gln Met Phe Phe Phe Val Phe Leu Gly Ala Ala Glu Cys Phe
 100 105 110
 Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser Pro
 115 120 125
 Leu Arg Tyr Pro Val Ile Met Ser Lys Arg Leu Cys Cys Ala Leu Val
 130 135 140
 Thr Gly Pro Tyr Val Ile Ser Phe Ile Asn Ser Phe Val Asn Val Val
 145 150 155 160
 Trp Met Ser Arg Leu His Phe Cys Asp Ser Asn Val Val Arg His Phe
 165 170 175
 Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Met Asp Thr Tyr
 180 185 190
 Asp Ile Glu Ile Met Ile His Ile Leu Ala Gly Ser Thr Leu Met Val

195	200	205
Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr Ile		
210	215	220
Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Leu Ser Thr Cys		
225	230	235 240
Ala Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile Phe		
245	250	255
Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln Val		
260	265	270
Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile		
275	280	285
Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Leu Ile Arg Val Met		
290	295	300
Gln Arg Arg Gln Asp Ser Arg		
305	310	

<210> 99
 <211> 999
 <212> DNA
 <213> Homo sapiens

<400> 99
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 tcttcctatt tttactatgt tttgcaatct atctctttac cttgataggc aatttagggc 180
 tgggtgtgtt ggtcattgag gattcctggc tccacaaccc catgtattat tttcttagtg 240
 ttttatcatt cttggatgct tgctattcta cagttgtcac tccaaaaatg ttgggtcaatt 300
 tcctggcaaa aaataaatcc atttcattta tcggatgtgc aacacagatg cttctttttg 360
 ttacttttgg aactacagaa tgttttctct tggctgcaat ggcttatgat cactatgtag 420
 ccatctacaa ccctctcctg tattcagtga gcatgtcacc cagagtctat gtgccactca 480
 tcaactgctt ctacgttgct ggcattttac atgctactat acatatagtg gctacattta 540
 gcctgtcctt ctgtggatcc aatgaaatta ggcattgtct ttgtgatatg cctcctctcc 600
 ttgctatttc ttgttctgac actcacacaa accagcttct actcttctac tttgtgggtt 660
 ctattgagat agtcactatc ctgattgtcc tcatttcctg tgatttcatt ctgttgtcca 720
 ttctgaagat gcattctgct aaggaagggc aaaaggcctt ctctacatgt ggctctcacc 780
 taactggagt gacaatttat catggaacaa ttctcgtcag ttatatgaga ccaagttcca 840
 gctatgcttc agaccatgac atcatagtgt caatatttta cacaattgtg attcccaagt 900
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<210> 100

<211> 322

<212> PRT

<213> Homo sapiens

<400> 100

Met Asp Lys Leu Ser Ser Gly Leu Asp Ile Tyr Arg Asn Pro Leu Lys
1 5 10 15

Asn Lys Thr Glu Val Thr Met Phe Ile Leu Thr Gly Phe Thr Asp Asp
20 25 30

Phe Glu Leu Gln Val Phe Leu Phe Leu Leu Phe Phe Ala Ile Tyr Leu
35 40 45

Phe Thr Leu Ile Gly Asn Leu Gly Leu Val Val Leu Val Ile Glu Asp
50 55 60

Ser Trp Leu His Asn Pro Met Tyr Tyr Phe Leu Ser Val Leu Ser Phe
65 70 75 80

Leu Asp Ala Cys Tyr Ser Thr Val Val Thr Pro Lys Met Leu Val Asn
85 90 95

Phe Leu Ala Lys Asn Lys Ser Ile Ser Phe Ile Gly Cys Ala Thr Gln
100 105 110

Met Leu Leu Phe Val Thr Phe Gly Thr Thr Glu Cys Phe Leu Leu Ala
115 120 125

Ala Met Ala Tyr Asp His Tyr Val Ala Ile Tyr Asn Pro Leu Leu Tyr
130 135 140

Ser Val Ser Met Ser Pro Arg Val Tyr Val Pro Leu Ile Thr Ala Ser
145 150 155 160

Tyr Val Ala Gly Ile Leu His Ala Thr Ile His Ile Val Ala Thr Phe
165 170 175

Ser Leu Ser Phe Cys Gly Ser Asn Glu Ile Arg His Val Phe Cys Asp
180 185 190

Met Pro Pro Leu Leu Ala Ile Ser Cys Ser Asp Thr His Thr Asn Gln
195 200 205

Leu Leu Leu Phe Tyr Phe Val Gly Ser Ile Glu Ile Val Thr Ile Leu
210 215 220

Ile Val Leu Ile Ser Cys Asp Phe Ile Leu Leu Ser Ile Leu Lys Met
 225 230 235 240

His Ser Ala Lys Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly Ser His
 245 250 255

Leu Thr Gly Val Thr Ile Tyr His Gly Thr Ile Leu Val Ser Tyr Met
 260 265 270

Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Ile Ile Val Ser Ile
 275 280 285

Phe Tyr Thr Ile Val Ile Pro Lys Leu Asn Pro Ile Ile Tyr Ser Leu
 290 295 300

Arg Asn Lys Glu Val Lys Lys Ala Val Lys Lys Met Leu Lys Leu Val
 305 310 315 320

Tyr Lys

<210> 101

<211> 979

<212> DNA

<213> Homo sapiens

<400> 101

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gtttctacca tgggtgacag gggaacaagc aatcactcag aaatgactga cttcattcct 60
gcaggcttca gggtagcccc agagctccac attctcctct tcctgctatt tttgtttgtt 120
tatgccatga tccttctagg gaatgttggg atgatgacca ttattatgac tgatcctcgg 180
ctgaacacac caatgtatct tttcctaggc aatctctcct tcattgatct tttctattca 240
tctgttattg aaccaaggc tatgatcaac ttctgggtctg aaaacaagtc tatctccttt 300
gcaggctgtg tggcccagct ctttctcttt gccctcctca ttgtgactga gggatttctc 360
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caaatgtcca cacgtctgtg tactcagttg gtggctggtt cctatTTTTg tggctgcatt 480
agctcagtta ttcagactag catgacattt actttatctt tttgcgcttc tcgggctggt 540
gaccactttt actgtgattc tcgccactt cagagactgt cttgttctga tctctttatc 600
catagaatga tatctttttc cttatcatgt attattatct tgccactat catagtcatt 660
atagtatctt acatgtatat tgtgtccaca gttctaaaga tacattctac tgagggacat 720
aagaaggcct tctccacctg cagctctcac ctgggagttg tgagtgtgct gtatgggtgct 780
gtctttttta tgtatctcac tcctgacaga tttcctgagc tgagtaaagt ggcatcctta 840
tgttactccc tagtactccc catgttgaat cctttgattt actctctgag gaacaaagat 900
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ctctttcacc aattttatt                                     979

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<210> 102
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 102
 Met Gly Asp Arg Gly Thr Ser Asn His Ser Glu Met Thr Asp Phe Ile
 1 5 10 15
 Leu Ala Gly Phe Arg Val Arg Pro Glu Leu His Ile Leu Leu Phe Leu
 20 25 30
 Leu Phe Leu Phe Val Tyr Ala Met Ile Leu Leu Gly Asn Val Gly Met
 35 40 45
 Met Thr Ile Ile Met Thr Asp Pro Arg Leu Asn Thr Pro Met Tyr Phe
 50 55 60
 Phe Leu Gly Asn Leu Ser Phe Ile Asp Leu Phe Tyr Ser Ser Val Ile
 65 70 75 80
 Glu Pro Lys Ala Met Ile Asn Phe Trp Ser Glu Asn Lys Ser Ile Ser
 85 90 95
 Phe Ala Gly Cys Val Ala Gln Leu Phe Leu Phe Ala Leu Leu Ile Val
 100 105 110
 Thr Glu Gly Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Phe Ile Ala
 115 120 125
 Ile Cys Asn Pro Leu Leu Tyr Ser Val Gln Met Ser Thr Arg Leu Cys
 130 135 140
 Thr Gln Leu Val Ala Gly Ser Tyr Phe Cys Gly Cys Ile Ser Ser Val
 145 150 155 160
 Ile Gln Thr Ser Met Thr Phe Thr Leu Ser Phe Cys Ala Ser Arg Ala
 165 170 175
 Val Asp His Phe Tyr Cys Asp Ser Arg Pro Leu Gln Arg Leu Ser Cys
 180 185 190
 Ser Asp Leu Phe Ile His Arg Met Ile Ser Phe Ser Leu Ser Cys Ile
 195 200 205
 Ile Ile Leu Pro Thr Ile Ile Val Ile Ile Val Ser Tyr Met Tyr Ile
 210 215 220

Val Ser Thr Val Leu Lys Ile His Ser Thr Glu Gly His Lys Lys Ala
 225 230 235 240

Phe Ser Thr Cys Ser Ser His Leu Gly Val Val Ser Val Leu Tyr Gly
 245 250 255

Ala Val Phe Phe Met Tyr Leu Thr Pro Asp Arg Phe Pro Glu Leu Ser
 260 265 270

Lys Val Ala Ser Leu Cys Tyr Ser Leu Val Thr Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Gln Glu Ala Leu Lys Lys
 290 295 300

Phe Leu Glu Lys Lys Asn Ile Ile Leu
 305 310

<210> 103
 <211> 982
 <212> DNA
 <213> Homo sapiens

<400> 103
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 gaaggcttca gggtcgcccc agagttctac attctcctct tcttcctgtt cctgctgac 120
 tatagcatgg ttcttttggg gaacattagt gtgatgacaa tcattgtaac tgattcccag 180
 ctgaacacac caatgtattt ttttctaggc aacctctcct tcattgacgt ctctactcc 240
 actgttattg ctccctaaagc catggccac ttctgtctg aaaaaaagac agtctctttt 300
 gcaggttgtg ttgcccagtt attccttttt gccctgttca ttgtaacaga ggggtttgtc 360
 ctggcagcca tggcctatga ccgcttcagt gccatctgca atcctcttct tcatagtgtt 420
 cacatgtcaa gacgcctctg cactcagttg gttgctgggt cttatttctg tggctgggcc 480
 agttccatcc tccaagtcag tgtaacattc tcagtgcctt tctgtgcttc cagagtcatt 540
 gctcacttct actgtgattc ttatcaaatt gaaaagattt cctgttctaa tctctttgtc 600
 aataagatgg tatctctgag tttgagtgtc atcattattt tgcctacaat tgttggttatt 660
 atagtatctt acctgtatat tgtatcctca gtcttgaaga tcccctccag tgaagggaga 720
 aagaaagact ttccacttg cagctcccat cggggtgttg taagtttgct ccaagggact 780
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 cttatgattt cctcattaat gg 982

<210> 104
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 104

Met Gly Asp Lys Gly Thr Gly Asn His Ser Asp Val Thr Asp Phe Ile
1 5 10 15

Leu Glu Gly Phe Arg Val Arg Pro Glu Phe Tyr Ile Leu Leu Phe Phe
20 25 30

Leu Phe Leu Leu Ile Tyr Ser Met Val Leu Leu Gly Asn Ile Ser Val
35 40 45

Met Thr Ile Ile Val Thr Asp Ser Gln Leu Asn Thr Pro Met Tyr Phe
50 55 60

Phe Leu Gly Asn Leu Ser Phe Ile Asp Val Ser Tyr Ser Thr Val Ile
65 70 75 80

Ala Pro Lys Ala Met Ala His Phe Leu Ser Glu Lys Lys Thr Val Ser
85 90 95

Phe Ala Gly Cys Val Ala Gln Leu Phe Leu Phe Ala Leu Phe Ile Val
100 105 110

Thr Glu Gly Phe Val Leu Ala Ala Met Ala Tyr Asp Arg Phe Ser Ala
115 120 125

Ile Cys Asn Pro Leu Leu His Ser Val His Met Ser Arg Arg Leu Cys
130 135 140

Thr Gln Leu Val Ala Gly Ser Tyr Phe Cys Gly Trp Ala Ser Ser Ile
145 150 155 160

Leu Gln Val Ser Val Thr Phe Ser Val Ser Phe Cys Ala Ser Arg Val
165 170 175

Ile Ala His Phe Tyr Cys Asp Ser Tyr Gln Ile Glu Lys Ile Ser Cys
180 185 190

Ser Asn Leu Phe Val Asn Lys Met Val Ser Leu Ser Leu Ser Val Ile
195 200 205

Ile Ile Leu Pro Thr Ile Val Val Ile Ile Val Ser Tyr Leu Tyr Ile
210 215 220

Val Ser Ser Val Leu Lys Ile Pro Ser Ser Glu Gly Arg Lys Lys Asp
225 230 235 240

Phe Ser Thr Cys Ser Ser His Arg Gly Val Val Ser Leu Leu Gln Gly

Ser Glu His Pro Glu Tyr Arg Val Phe Leu Phe Ser Cys Phe Leu Phe
 20 25 30

Leu Tyr Ser Gly Ala Leu Thr Gly Asn Val Leu Ile Thr Leu Ala Ile
 35 40 45

Thr Phe Asn Pro Gly Leu His Ala Pro Met Tyr Phe Phe Leu Leu Asn
 50 55 60

Leu Ala Thr Met Asp Ile Ile Cys Thr Ser Ser Ile Met Pro Lys Ala
 65 70 75 80

Leu Ala Ser Leu Val Ser Glu Glu Ser Ser Ile Ser Tyr Gly Gly Cys
 85 90 95

Met Ala Gln Leu Tyr Phe Leu Thr Trp Ala Ala Ser Ser Glu Leu Leu
 100 105 110

Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys His Pro
 115 120 125

Leu His Tyr Ser Ser Met Met Ser Lys Val Phe Cys Ser Gly Leu Ala
 130 135 140

Thr Ala Val Trp Leu Leu Cys Ala Val Asn Thr Ala Ile His Thr Gly
 145 150 155 160

Leu Met Leu Arg Leu Asp Phe Cys Gly Pro Asn Val Ile Ile His Phe
 165 170 175

Phe Cys Glu Val Pro Pro Leu Leu Leu Leu Ser Cys Ser Ser Thr Tyr
 180 185 190

Val Asn Gly Val Met Ile Val Leu Ala Asp Ala Phe Tyr Gly Ile Val
 195 200 205

Asn Phe Leu Met Thr Ile Ala Ser Tyr Gly Phe Ile Val Ser Ser Ile
 210 215 220

Leu Lys Val Lys Thr Ala Trp Gly Arg Gln Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ser Ser His Leu Thr Val Val Cys Met Tyr Tyr Thr Ala Val Phe Tyr
 245 250 255

Ala Tyr Ile Ser Pro Val Ser Gly Tyr Ser Ala Gly Lys Ser Lys Leu
 260 265 270

Ala Gly Leu Leu Tyr Thr Val Leu Ser Pro Thr Leu Asn Pro Leu Ile
 275 280 285

Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Leu Arg Lys Leu Phe
 290 295 300

Pro Phe Phe Arg Asn
 305

<210> 107
 <211> 1006
 <212> DNA
 <213> Homo sapiens

<400> 107
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 cttgtgacct tagtgggcaa catcatcatt atcttgatct cccacctgga cccctgcctc 180
 cacatgccca tgtacttctt cctcactaac ttgtctttcc tagatctctg cttcaccacc 240
 agttctatcc cccagctgct tttcaatcta ggcagcccag gcaagactat cagccacacg 300
 ggctgtgccca tccagctctt catgttctctg ggctgggtg gcaagagtgt attctcttgg 360
 cagccgtggc ctatgaccgc ttattgcaa tctgcaagcc ccttcactat tctgtcatta 420
 tgcaccctca gctgtgctgg aagtgggtgt ctgtggcccg ggggtgttg actcctcagt 480
 tctctagtta tgtctctgt gactatgaag ctgccacgat gtggaagatg taagttgaaa 540
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 gagagcactg ttttcacctt atcggtagta attgtcctga tgcctttgtg tcttctctc 660
 atctcttata gctacattgc cctagcagtg ctgagaatca agtcagccac aggaagaagg 720
 aaggccttca atatgtgagg gtcccacctc accgtggtct ccttgtttta tgggaatatt 780
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 cttttctaca acttaatgac ccccatgtta aacctgtca tctatacact gagaaacaag 900
 gatgtaaaag gtgcactgaa gaggcttgtg tctagaaaac acagtgcag tgactgctct 960
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<210> 108
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 108
 Met Pro Leu Ser Cys Pro Thr Arg Ala Ala Gln Lys Gln Phe Ile Leu
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Leu Gly Phe Ser Gly Arg Pro Arg Leu Glu His Val Leu Phe Val Phe
 20 25 30

Val Leu Ile Phe Tyr Leu Val Thr Leu Val Gly Asn Ile Ile Ile Ile

35	40	45
Leu Ile Ser His Leu Asp Pro Cys Leu His Met Pro Met Tyr Phe Phe		
50	55	60
Leu Thr Asn Leu Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ser Ile		
65	70	75
Pro Gln Leu Leu Phe Asn Leu Gly Ser Pro Gly Lys Thr Ile Ser His		
	85	90
Thr Gly Cys Ala Ile Gln Leu Phe Met Phe Leu Gly Leu Gly Gly Lys		
	100	105
Ser Val Phe Ser Trp Gln Pro Trp Pro Met Thr Ala Ser Leu Gln Ser		
	115	120
Ala Ser Pro Phe Thr Ile Leu Ser Leu Cys Thr Leu Ser Cys Ala Gly		
	130	135
Ser Trp Cys Leu Trp Pro Gly Gly Val Gly Leu Leu Ser Ser Leu Val		
145	150	155
Met Ser Pro Val Thr Met Lys Leu Pro Arg Cys Gly Arg Cys Lys Leu		
	165	170
Lys His Phe Leu Cys Glu Met Pro Ala Leu Ile Lys Ile Thr Cys Val		
	180	185
Asp Thr Val Ala Met Glu Ser Thr Val Phe Thr Leu Ser Val Val Ile		
	195	200
Val Leu Met Pro Leu Cys Leu Ile Leu Ile Ser Tyr Ser Tyr Ile Ala		
	210	215
Leu Ala Val Leu Arg Ile Lys Ser Ala Thr Gly Arg Arg Lys Ala Phe		
225	230	235
Asn Met Cys Gly Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Asn		
	245	250
Ile Ile Tyr Met Tyr Met Gln Pro Trp Asn Asn Ser Ser Gln Asp Gln		
	260	265
Gly Lys Phe Leu Thr Leu Phe Tyr Asn Leu Met Thr Pro Met Leu Asn		
	275	280
Pro Val Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys		

290

295

300

Arg Leu Val Ser Arg Lys His Ser Asp Ser Asp Cys Ser
 305 310 315

<210> 109

<211> 972

<212> DNA

<213> Homo sapiens

<400> 109

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 gcaagcatta ctggaacat cctcattgtg ttttctgtga ccactgaccc tcacttacac 180
 tccccatgt actttctact ggtcagtctc tccttcattg acttaggagc ctgctctgtc 240
 acttctccca agatgattta tgacctgttc agaaagcgca aagtcactc ctttgaggc 300
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 agcccaagaa tgtgcctttc atttctggct gttgcctgga cccttggtgt cagtcactcc 480
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 ttcatgggtca ctgttaacag tgggtttatc tgtgtgggta ctttcttcat acttctaate 660
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 taagcccttc tc 972

<210> 110

<211> 312

<212> PRT

<213> Homo sapiens

<400> 110

Met Asp Gly Glu Asn His Ser Val Val Ser Glu Phe Leu Phe Leu Gly
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 Leu Thr His Ser Trp Glu Ile Gln Leu Leu Leu Leu Val Phe Ser Ser
 20 25 30
 Val Leu Tyr Val Ala Ser Ile Thr Gly Asn Ile Leu Ile Val Phe Ser
 35 40 45
 Val Thr Thr Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Val
 50 55 60

Ser Leu Ser Phe Ile Asp Leu Gly Ala Cys Ser Val Thr Ser Pro Lys
 65 70 75 80
 Met Ile Tyr Asp Leu Phe Arg Lys Arg Lys Val Ile Ser Phe Gly Gly
 85 90 95
 Cys Ile Ala Gln Ile Phe Phe Ile His Val Ile Gly Gly Val Glu Met
 100 105 110
 Val Leu Leu Ile Ala Met Ala Phe Asp Ser Tyr Val Ala Leu Leu Lys
 115 120 125
 Pro Leu His Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Leu Ser Phe
 130 135 140
 Leu Ala Val Ala Trp Thr Leu Val Val Ser His Ser Leu Phe Gln Leu
 145 150 155 160
 Ala Phe Leu Val Asn Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Ser
 165 170 175
 Phe Tyr Cys Asp Leu Pro Gln Leu Leu Arg Leu Ala Cys Thr Asp Thr
 180 185 190
 Tyr Arg Leu Gln Phe Met Val Thr Val Asn Ser Gly Phe Ile Cys Val
 195 200 205
 Gly Thr Phe Phe Ile Leu Leu Ile Ser Tyr Val Phe Ile Leu Phe Thr
 210 215 220
 Val Trp Lys His Ser Ser Gly Gly Ser Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240
 Ser Ala His Ser Thr Ala Val Leu Leu Phe Phe Gly Pro Pro Met Phe
 245 250 255
 Val Tyr Thr Trp Pro His Pro Asn Ser Gln Met Asp Lys Phe Leu Ala
 260 265 270
 Ile Phe Asp Ala Val Leu Thr Pro Phe Leu Asn Pro Val Val Tyr Thr
 275 280 285
 Phe Arg Asn Lys Glu Met Lys Ala Ala Ile Lys Arg Val Cys Lys Gln
 290 295 300
 Leu Val Ile Tyr Lys Lys Ile Ser
 305 310

<210> 111
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 111
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 gcaagcatta ctggaacat cctcattgtg ttttctgtga ccactgaccc tcacttacac 180
 tcccccatgt actttctact ggtcagtctc tccttcattg acttaggagc ctgctctgtc 240
 acttctccca agatgattta tgacctgttc agaaagcgca aagtcattct ctttggaggc 300
 tgcacgcgtc aaatcttctt catccacgtc attggtgggtg tggagatggg gctgctcata 360
 gccatggcct ttgacagtta tgtggcccta ttaaagcccc tccactatct gaccattatg 420
 agcccaagaa tgtgcccttc atttctggct gttgcctgga cccttggtgt cagtcactcc 480
 ctgttccaac tggcatttct tggttaattta cccttctgtg gccctaattg gttggacagc 540
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<210> 112
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 112
 Met Asp Gly Glu Asn His Ser Val Val Ser Glu Phe Leu Phe Leu Gly
 1 5 10 15
 Leu Thr His Ser Trp Glu Ile Gln Leu Leu Leu Val Phe Ser Ser
 20 25 30
 Val Leu Tyr Val Ala Ser Ile Thr Gly Asn Ile Leu Ile Val Phe Ser
 35 40 45
 Val Thr Thr Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Val
 50 55 60
 Ser Leu Ser Phe Ile Asp Leu Gly Ala Cys Ser Val Thr Ser Pro Lys
 65 70 75 80

Met Ile Tyr Asp Leu Phe Arg Lys Arg Lys Val Ile Ser Phe Gly Gly
 85 90 95

Cys Ile Ala Gln Ile Phe Phe Ile His Val Ile Gly Gly Val Glu Met
 100 105 110

Val Leu Leu Ile Ala Met Ala Phe Asp Ser Tyr Val Ala Leu Leu Lys
 115 120 125

Pro Leu His Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Leu Ser Phe
 130 135 140

Leu Ala Val Ala Trp Thr Leu Val Val Ser His Ser Leu Phe Gln Leu
 145 150 155 160

Ala Phe Leu Val Asn Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Ser
 165 170 175

Phe Tyr Cys Asp Leu Pro Gln Leu Leu Arg Leu Ala Cys Thr Asp Thr
 180 185 190

Tyr Arg Leu Gln Phe Met Val Thr Val Asn Ser Gly Phe Ile Cys Val
 195 200 205

Gly Thr Phe Phe Ile Leu Leu Ile Ser Tyr Val Phe Ile Leu Phe Thr
 210 215 220

Val Trp Lys His Ser Ser Gly Gly Ser Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240

Ser Ala His Ser Thr Ala Val Leu Leu Phe Phe Gly Pro Pro Met Phe
 245 250 255

Val Tyr Thr Trp Pro His Pro Asn Ser Gln Met Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Asp Ala Val Leu Thr Pro Phe Leu Asn Pro Val Val Tyr Thr
 275 280 285

Phe Arg Asn Lys Glu Met Lys Ala Ala Ile Lys Arg Val Cys Lys Gln
 290 295 300

Leu Val Ile Tyr Lys Lys Ile Ser
 305 310

<210> 113
 <211> 1001

<212> DNA

<213> Homo sapiens

<400> 113

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gttggtgctg actgagaaca cactcatcat tatggcaatt aggaaccatt ccaccctcca 180
caaaccatg tacttttttc tagctaatat gtcccttctg gagatctggt atgtcactgt 240
cactattccc aagatgcttg ctggctttgt tggatccaaa caggatcatg gacagctaata 300
ctcctttgag ggatgcatga cacagctcta ctttttcctt ggcttgggct gcactgagt 360
tgtccttctc gctgttatgg cctatgatcg ctatatggcc atctgctatc ctctccacta 420
cccagtcatt gtcagtggcc ggctgtgtgt gcagatggct gctggctctt gggctggagg 480
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catcatcaac cactttttct gtgatgtctc tccattgctc aacctctcat gcactgat 600
gtccacagca gagcttacag atttcacatc ggccattttt attcttctag ggccactctc 660
tgtcactggg gcctcctatg tggccattac tgggtgctgtg atgcacattc cttcggtg 720
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<210> 114

<211> 329

<212> PRT

<213> Homo sapiens

<400> 114

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Met Thr Trp Ser Gly Gly Thr Ile Val Gly Glu Trp Val Ser Leu Cys
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Cys Trp Gly Phe Pro Ala Pro Ala Pro Leu Gln Val Leu Leu Phe Ala
      20              25              30

Leu Leu Leu Leu Ala Tyr Val Leu Val Leu Thr Glu Asn Thr Leu Ile
      35              40              45

Ile Met Ala Ile Arg Asn His Ser Thr Leu His Lys Pro Met Tyr Phe
      50              55              60

Phe Leu Ala Asn Met Ser Phe Leu Glu Ile Trp Tyr Val Thr Val Thr
      65              70              75              80

Ile Pro Lys Met Leu Ala Gly Phe Val Gly Ser Lys Gln Asp His Gly
      85              90              95

Gln Leu Ile Ser Phe Glu Gly Cys Met Thr Gln Leu Tyr Phe Phe Leu
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100	105	110
Gly Leu Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp		
115	120	125
Arg Tyr Met Ala Ile Cys Tyr Pro Leu His Tyr Pro Val Ile Val Ser		
130	135	140
Gly Arg Leu Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe		
145	150	155
Gly Ile Ser Met Val Lys Val Phe Leu Ile Ser Gly Leu Ser Tyr Cys		
165	170	175
Gly Pro Asn Ile Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu		
180	185	190
Asn Leu Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Ile		
195	200	205
Leu Ala Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser		
210	215	220
Tyr Val Ala Ile Thr Gly Ala Val Met His Ile Pro Ser Ala Ala Gly		
225	230	235
Arg Tyr Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile		
245	250	255
Ile Phe Tyr Ala Ala Ser Ile Phe Ile Tyr Ala Arg Pro Lys Ala Leu		
260	265	270
Ser Ala Phe Asp Thr Asn Lys Leu Ser Leu Tyr Cys Met Leu Ser Leu		
275	280	285
Tyr His Cys Ser Ile Pro Ser Phe Thr Ala Cys Ala Ile Lys Arg Ser		
290	295	300
Arg Glu Pro Tyr Ala Val Leu Cys Thr Leu Tyr Gln His Gln Asp Pro		
305	310	315
Asp Pro Lys Lys Ala Ser Arg Asn Val		
325		

<210> 115
 <211> 973
 <212> DNA

<213> Homo sapiens

<400> 115

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aatgggcaat gtctcatca tcttggtcac tatactgac tctgcactac aaagtctat 180
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atcctgtgcc cagctggcag ctgcctcttg gttctcaggg ttttcagtgg ccaactgtgca 480
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ggaaactgaa ggg 973
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<210> 116

<211> 315

<212> PRT

<213> Homo sapiens

<400> 116

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Met Met Trp Glu Asn Trp Thr Ile Val Ser Glu Phe Val Leu Val Ser
  1             5             10            15

Phe Ser Ala Leu Ser Thr Glu Leu Gln Ala Leu Leu Phe Leu Leu Phe
      20             25             30

Leu Thr Ile Tyr Leu Val Thr Leu Met Gly Asn Val Leu Ile Ile Leu
      35             40             45

Val Thr Ile Ala Asp Ser Ala Leu Gln Ser Pro Met Tyr Phe Phe Leu
      50             55             60

Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu Val Ile Val Pro
      65             70             75             80

Lys Met Leu Gly Thr Leu Ile Ile Gln Asp Thr Thr Ile Ser Phe Leu
      85             90             95

Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Gly Ala Ala Glu
      100            105            110
```

Cys Cys Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125

Asp Pro Leu His Tyr Pro Val Ile Met Gly His Ile Ser Cys Ala Gln
 130 135 140

Leu Ala Ala Ala Ser Trp Phe Ser Gly Phe Ser Val Ala Thr Val Gln
 145 150 155 160

Thr Thr Trp Ile Phe Ser Phe Pro Phe Cys Gly Pro Asn Arg Val Asn
 165 170 175

His Phe Phe Cys Asp Ser Pro Pro Val Ile Ala Leu Val Cys Ala Asp
 180 185 190

Thr Ser Val Phe Glu Leu Glu Ala Leu Thr Ala Thr Val Pro Phe Ile
 195 200 205

Leu Phe Pro Phe Leu Leu Ile Leu Gly Ser Tyr Val Arg Ile Leu Ser
 210 215 220

Thr Ile Phe Arg Met Pro Ser Ala Glu Gly Lys His Gln Ala Phe Ser
 225 230 235 240

Thr Cys Ser Ala His Leu Leu Val Val Ser Leu Phe Tyr Ser Thr Ala
 245 250 255

Ile Leu Thr Tyr Phe Arg Pro Gln Ser Ser Ala Ser Ser Glu Ser Lys
 260 265 270

Lys Leu Leu Ser Leu Ser Ser Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285

Ile Ile Tyr Ser Ser Arg Asn Lys Glu Val Lys Ala Ala Leu Lys Arg
 290 295 300

Leu Ile His Arg Thr Leu Gly Ser Gln Lys Leu
 305 310 315

<210> 117

<211> 937

<212> DNA

<213> Homo sapiens

<400> 117

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ttcttctctt ccaacctgtc ctttgcagat atcagttttg tgtctaccac tgtcccgaag 240
atgctggtga atatccagac gcagagcaga gtcatcacct atgcaggctg catcaccag 300
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gatcggtttg tggccatctg tcatcctctg tactacacaa tcatcatgaa cctcagttc 420
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aggaagcaat aaaaggactc ttcttcaatt aatgcct 937

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<210> 118
<211> 303
<212> PRT
<213> Homo sapiens

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<400> 118
Met Lys Pro Gly Asn Asp Thr Arg Ile Ser Glu Phe Leu Leu Leu Gly
  1             5             10             15

Leu Ser Ala Glu Pro Glu Leu Gln Pro Phe Phe Phe Gly Leu Phe Leu
      20             25             30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
      35             40             45

Thr Ile Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
      50             55             60

Asn Leu Ser Phe Ala Asp Ile Ser Phe Val Ser Thr Thr Val Pro Lys
      65             70             75             80

Met Leu Val Asn Ile Gln Thr Gln Ser Arg Val Ile Thr Tyr Ala Gly
      85             90             95

Cys Ile Thr Gln Met Cys Phe Phe Leu Leu Phe Ala Val Leu Asp Ser
      100            105            110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
      115            120            125

Pro Leu Tyr Tyr Thr Ile Ile Met Asn Pro Gln Phe Tyr Arg Trp Ile

```

130		135		140	
Leu Ser Val Leu Asn Ser Leu Leu Gln Ser Leu Met Val Leu Pro Leu					
145		150		155	160
Pro Phe Tyr Thr Asp Ile Ala Ile Pro His Phe Phe Cys Glu Leu Asn					
	165		170		175
Gln Ile Ile Cys Ile Ala Cys Ser Asp Thr Phe Leu Asn Asp Ile Met					
	180		185		190
Ile Tyr Cys Ala Thr Val Leu Leu Gly Gly Gly Pro Leu Thr Gly Ile					
	195		200		205
Leu Tyr Ser Tyr Ser Lys Ile Val Ser Ser Ile Arg Ala Ile Ser Ser					
	210		215		220
Ala Gln Gly Lys Tyr Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ser					
	225		230		240
Val Val Ser Leu Phe Tyr Gly Thr Ser Leu Gly Met Tyr Leu Ser Ser					
	245		250		255
Ala Ala Thr His Asn Ser Pro Ser Ser Ala Thr Ala Ser Val Met Tyr					
	260		265		270
Thr Val Val Thr Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn					
	275		280		285
Lys Asp Leu Lys Asp Ala Leu Lys Arg Phe Phe Arg Arg Lys Gln					
	290		295		300

<210> 119

<211> 955

<212> DNA

<213> Homo sapiens

<400> 119

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gggaacctgc tcatcatcct ggccgcaatc tcagactcct gcctccacac ccccatgtac 180
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tgtggactgc tggttctggt gtcttgatc atgagtgtcc taaactccat gttacaaagc 480
ttagtgacat tgcagttgtc ctctgcaca gacttgaaa tccctcactt tttctgtgaa 540

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cttaatgaga tgatccacct tgctgttct gacaccttg tgaacaacat ggtgatgcat 600
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 gtcaccccca tgctcaaccc cttcatttac agtctgagga ataaagacat aaagggggct 900
 ctgacacaat tcttcagagg gaaacaataa aagagccatt ttcggctgg gcaca 955

<210> 120

<211> 309

<212> PRT

<213> Homo sapiens

<400> 120

Met Lys Ala Gly Asn Glu Thr Gln Ile Ser Glu Phe Leu Leu Leu Gly
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Phe Ser Glu Lys Gln Glu Leu Gln Pro Phe Leu Phe Gly Leu Phe Leu
 20 25 30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Ala Ile Ser Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Phe Ala Ser Thr Met Val Pro Lys
 65 70 75 80

Met Leu Val Asn Ile Gln Thr Gln Ser Lys Val Ile Thr Tyr Ala Gly
 85 90 95

Cys Ile Thr Gln Met Cys Phe Phe Val Leu Phe Ile Val Leu Asp Ser
 100 105 110

Leu Leu Leu Thr Val Met Ala Tyr Asp Gln Phe Val Ala Ile Cys His
 115 120 125

Pro Leu His Tyr Thr Val Ile Met Ser Pro Gln Leu Cys Gly Leu Leu
 130 135 140

Val Leu Val Ser Trp Ile Met Ser Val Leu Asn Ser Met Leu Gln Ser
 145 150 155 160

Leu Val Thr Leu Gln Leu Ser Phe Cys Thr Asp Leu Glu Ile Pro His
 165 170 175

Phe Phe Cys Glu Leu Asn Glu Met Ile His Leu Ala Cys Ser Asp Thr
180 185 190

Phe Val Asn Asn Met Val Met His Phe Ala Ala Val Leu Leu Asp Gly
195 200 205

Gly Pro Leu Val Gly Ile Leu Tyr Ser Tyr Cys Arg Ile Val Ser Ser
210 215 220

Ile Arg Ala Ile Ser Ser Thr Gln Gly Lys Tyr Lys Ala Leu Ser Thr
225 230 235 240

Cys Ala Ser His Leu Ser Val Val Ser Ile Phe Tyr Gly Thr Gly Leu
245 250 255

Gly Val Tyr Leu Ser Ser Thr Met Thr Gln Asn Leu His Ser Thr Ala
260 265 270

Val Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Gly Ala Leu Thr Gln Phe
290 295 300

Phe Arg Gly Lys Gln
305

<210> 121

<211> 865

<212> DNA

<213> Homo sapiens

<400> 121

ctctgactcc cacctccaca ccccatgta cttcttcctc tccaacctgt ccttggtgta 60
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agtcattctcc tatgaaggct gcctgactca gatgtctttt tttgtccttt ttgcatgtat 180
ggatgacatg ctccctgagt tgatggccta tgaccgggtt gtggccatct gtcacccct 240
gcactaccga atcatcatga acccagcct ctgtggcttc ttaattctgt tgtctttttt 300
tattagtctt ttggactccc agttgcacaa tttgattatg ttacagctca cctgcttcaa 360
ggatgtggac atttctaatt tcttctgtga ccttctcaa ctccctccacc ttaggtgttc 420
cgacaccttc atcaatgaaa tggatcatata ttcatgggt gccatatttg gctgtctccc 480
tatctcaggg atccttttct ctactataa aattgtttcc cccattctga gagttccaac 540
atcagatggg aagtataaag ccttctccac ctgtggctct cacctggcag ttgtttgctt 600
attttatgga acagggcttg tagggtagct cagttcagct gtgttaccat cccccaggaa 660
gagtatggtg gcttcagtga tgtacactgt ggtaaccccc atgctgaacc ccttcatcta 720
cagcctgagg aacaaggaca ttcaaagtgc cctgtgcagg ctgcatggca gaatcatcaa 780
atctcatcat ctccatcctt tttgttatat gggatagaaa tggcagcaaa atttaacacc 840

taggcctgca aattctgcct ccttg

865

<210> 122

<211> 263

<212> PRT

<213> Homo sapiens

<400> 122

Met Tyr Phe Phe Leu Ser Asn Leu Ser Leu Ala Asp Ile Gly Phe Thr
1 5 10 15

Ser Thr Thr Val Pro Lys Met Ile Val Asp Met Gln Thr His Ser Arg
20 25 30

Val Ile Ser Tyr Glu Gly Cys Leu Thr Gln Met Ser Phe Phe Val Leu
35 40 45

Phe Ala Cys Met Asp Asp Met Leu Leu Ser Val Met Ala Tyr Asp Arg
50 55 60

Phe Val Ala Ile Cys His Pro Leu His Tyr Arg Ile Ile Met Asn Pro
65 70 75 80

Arg Leu Cys Gly Phe Leu Ile Leu Leu Ser Phe Phe Ile Ser Leu Leu
85 90 95

Asp Ser Gln Leu His Asn Leu Ile Met Leu Gln Leu Thr Cys Phe Lys
100 105 110

Asp Val Asp Ile Ser Asn Phe Phe Cys Asp Pro Ser Gln Leu Leu His
115 120 125

Leu Arg Cys Ser Asp Thr Phe Ile Asn Glu Met Val Ile Tyr Phe Met
130 135 140

Gly Ala Ile Phe Gly Cys Leu Pro Ile Ser Gly Ile Leu Phe Ser Tyr
145 150 155 160

Tyr Lys Ile Val Ser Pro Ile Leu Arg Val Pro Thr Ser Asp Gly Lys
165 170 175

Tyr Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Cys Leu
180 185 190

Phe Tyr Gly Thr Gly Leu Val Gly Tyr Leu Ser Ser Ala Val Leu Pro
195 200 205

Ser Pro Arg Lys Ser Met Val Ala Ser Val Met Tyr Thr Val Val Thr
 210 215 220

Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Asp Ile Gln
 225 230 235 240

Ser Ala Leu Cys Arg Leu His Gly Arg Ile Ile Lys Ser His His Leu
 245 250 255

His Pro Phe Cys Tyr Met Gly
 260

<210> 123
 <211> 1044
 <212> DNA
 <213> Homo sapiens

<400> 123
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 agaaaaatca attatccaaa taccaaactg gatttcgagc aagtgaacaa cataacggaa 120
 ttcatcttgc ttggcctgac acagaacgca gaggcacaga aactcttggt tgctgtgttt 180
 acactcatct actttctcac catggtagac aacctaataca ttgtggtgac aatcaccacc 240
 agcccagccc tggactcccc cgtgtatttt tttctgtctt tcttttcctt catagatggc 300
 tgctcctctt ctaccatggc ccccaaatg atatttgact tactcaactga aaagaaaact 360
 atttccttca gtgggtgcat gaccagctc tttgtagaac atttctttgg gggagttgag 420
 atcattctgc tcgtggtgat ggcctatgac tgctatgtgg ccatctgcaa gccctgtac 480
 tacctgatca caatgaacag gcaggatgtt ggcctcctgg tggccatggc atgggtcggg 540
 ggatttcttc acgctctgat tcaaagtctt ttaatagtct ggctgccctt ctgtggcccc 600
 aatgtcattg accatttcat ctgtgacctt tccctctgc taaaactctc ctgcaactgac 660
 actcacgtct ttggactctt tgttgccgcc aacagtgggc tgatgtgtat gctcattttt 720
 tctattctta ttacctctta cgtcctaata ctctgctcac agcgggaaggc tctctctacc 780
 tgcgccttcc atatcaactgt agtcgtctta ttctttgttc cctgtatatt ggtgtacctt 840
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 cccatgttaa accctttaat ctacaccctc agaaacacag aggtgaaaaa tgccatgaag 960
 cagctctgga gccaaataat ctggggtaac aatttgtgtg attagagaag ataaacacag 1020
 aacctactca tattttaaca acag 1044

<210> 124
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 124
 Met Tyr Val Ser Asn Cys Asn Pro Cys Ala Ile His Arg Lys Ile Asn
 1 5 10 15

Tyr Pro Asn Thr Lys Leu Asp Phe Glu Gln Val Asn Asn Ile Thr Glu
 20 25 30
 Phe Ile Leu Leu Gly Leu Thr Gln Asn Ala Glu Ala Gln Lys Leu Leu
 35 40 45
 Phe Ala Val Phe Thr Leu Ile Tyr Phe Leu Thr Met Val Asp Asn Leu
 50 55 60
 Ile Ile Val Val Thr Ile Thr Thr Ser Pro Ala Leu Asp Ser Pro Val
 65 70 75 80
 Tyr Phe Phe Leu Ser Phe Phe Ser Phe Ile Asp Gly Cys Ser Ser Ser
 85 90 95
 Thr Met Ala Pro Lys Met Ile Phe Asp Leu Leu Thr Glu Lys Lys Thr
 100 105 110
 Ile Ser Phe Ser Gly Cys Met Thr Gln Leu Phe Val Glu His Phe Phe
 115 120 125
 Gly Gly Val Glu Ile Ile Leu Leu Val Val Met Ala Tyr Asp Cys Tyr
 130 135 140
 Val Ala Ile Cys Lys Pro Leu Tyr Tyr Leu Ile Thr Met Asn Arg Gln
 145 150 155 160
 Val Cys Gly Leu Leu Val Ala Met Ala Trp Val Gly Gly Phe Leu His
 165 170 175
 Ala Leu Ile Gln Met Leu Leu Ile Val Trp Leu Pro Phe Cys Gly Pro
 180 185 190
 Asn Val Ile Asp His Phe Ile Cys Asp Leu Phe Pro Leu Leu Lys Leu
 195 200 205
 Ser Cys Thr Asp Thr His Val Phe Gly Leu Phe Val Ala Ala Asn Ser
 210 215 220
 Gly Leu Met Cys Met Leu Ile Phe Ser Ile Leu Ile Thr Ser Tyr Val
 225 230 235 240
 Leu Ile Leu Cys Ser Gln Arg Lys Ala Leu Ser Thr Cys Ala Phe His
 245 250 255
 Ile Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Leu Val Tyr Leu
 260 265 270

Arg Pro Met Ile Thr Phe Pro Ile Asp Lys Ala Val Ser Val Phe Tyr
 275 280 285

Thr Val Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn
 290 295 300

Thr Glu Val Lys Asn Ala Met Lys Gln Leu Trp Ser Gln Ile Ile Trp
 305 310 315 320

Gly Asn Asn Leu Cys Asp
 325

<210> 125

<211> 986

<212> DNA

<213> Homo sapiens

<400> 125

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ccatataaat ggctgacaga aatgtcactg tgataactga attcaccctc ctgggggttga 60
ctgataaccc tgaaatgaat gttgtccttt ctgtgctctt tctattaatc tatctcatta 120
ctgtccttggg caacttttgg attatcataa taattctggc tagtgcccaa ctccattcac 180
ccatgtactt ttcccttagc cagttggctt tcttagattt ctgctattct tcagtcttga 240
ttcctaaaat gttggtgaat tacatagcag gacagaaagt catctcttat cacgggttggc 300
tccttcagta ttcccttggc agcttggtcc tgactactga atgcttcctc ctggctgcca 360
tggaatgtga tcgggtatctc gctgtttgcc acccacttca ctacaaaggc ctcatgactc 420
ctactttctg gatctatttg gtgactgttt cttacctgct gggctctgta aactccctca 480
cccacctgag tagcttactc agtttgtctt tctgtgggtc caatgttata aaccgttatt 540
tctgtgacat tccattgctc ttccaactct cctgttccaa caccacaacac agtaagattt 600
tatttactgt cctttctgga gcaacatcag tgactacctt tttgatagtg gttagttcct 660
atctggtaat cctactcatt gtccctgaaga tacattccac caggggcaga aataaagcca 720
tatccacatg tgcctcccac ctaatggtag tgactctctt ctacagaaca gtgatattta 780
cttatctggg agccaaccct ggatactcac aggatagacc caaaattctg cctgtggagt 840
gcacactttt gttgtcaata ctaaatcttc taatatatag cgtgagaaac agagaagtca 900
aagaagccat aaaaataatt attaagagaa aaatacttcc tcagtgaaca tgaattttca 960
gccagaaaca tttaagacta ttatca 986
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<210> 126

<211> 312

<212> PRT

<213> Homo sapiens

<400> 126

Met Ala Asp Arg Asn Val Thr Val Ile Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Thr Asp Asn Pro Glu Met Asn Val Val Leu Ser Val Leu Phe Leu

20	25	30
Leu Ile Tyr Leu Ile Thr Val Leu Gly Asn Phe Trp Ile Ile Ile Ile		
35	40	45
Ile Leu Ala Ser Ala Gln Leu His Ser Pro Met Tyr Phe Phe Leu Ser		
50	55	60
Gln Leu Ala Phe Leu Asp Phe Cys Tyr Ser Ser Val Leu Ile Pro Lys		
65	70	75
Met Leu Val Asn Tyr Ile Ala Gly Gln Lys Val Ile Ser Tyr His Gly		
85	90	95
Cys Leu Leu Gln Tyr Ser Phe Val Ser Leu Phe Leu Thr Thr Glu Cys		
100	105	110
Phe Leu Leu Ala Ala Met Ala Cys Asp Arg Tyr Leu Ala Val Cys His		
115	120	125
Pro Leu His Tyr Lys Gly Leu Met Thr Pro Thr Phe Trp Ile Tyr Leu		
130	135	140
Val Thr Val Ser Tyr Leu Leu Gly Ser Val Asn Ser Leu Thr His Leu		
145	150	155
Ser Ser Leu Leu Ser Leu Ser Phe Cys Gly Ser Asn Val Ile Asn Arg		
165	170	175
Tyr Phe Cys Asp Ile Pro Leu Leu Phe Gln Leu Ser Cys Ser Asn Thr		
180	185	190
Gln His Ser Lys Ile Leu Phe Thr Val Leu Ser Gly Ala Thr Ser Val		
195	200	205
Thr Thr Phe Leu Ile Val Val Ser Ser Tyr Leu Val Ile Leu Leu Ile		
210	215	220
Val Leu Lys Ile His Ser Thr Arg Gly Arg Asn Lys Ala Ile Ser Thr		
225	230	235
Cys Ala Ser His Leu Met Val Val Thr Leu Phe Tyr Arg Thr Val Ile		
245	250	255
Phe Thr Tyr Leu Gly Ala Asn Pro Gly Tyr Ser Gln Asp Arg Pro Lys		
260	265	270
Ile Leu Pro Val Glu Cys Thr Leu Leu Leu Ser Ile Leu Asn Leu Leu		

275 280 285
 Ile Tyr Ser Val Arg Asn Arg Glu Val Lys Glu Ala Ile Lys Ile Ile
 290 295 300

Ile Lys Arg Lys Ile Leu Pro Gln
 305 310

<210> 127
 <211> 1012
 <212> DNA
 <213> Homo sapiens

<400> 127
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 catcctcttg ggcttctcag aatttcagaga ccttcagata ccctgttcc tggctcttct 120
 gaccatctac acaatcactg tgatggggaa tctgggcatg atcatgggtca tcaggatcaa 180
 ccccaaaactc cacacccta tgtacttttt cctcagccac ttgtcctttg ttgatttctg 240
 ttattccacc acaattacac caaaactgct ggagaacttg gttgtggaag acagaatcat 300
 ctccttcaca ggatgcatca tgcaattctt ctttgcctgt atatttggg tgacagaaac 360
 attcatgctg gcagcgatgg cttatgacag atttgtggca gtgtgtaacc ctctgcttta 420
 cacagttagc atgtcccaga ggctttgctc cttgttagtg gctgcatcat actcttgag 480
 ttttagttgt tccttaacat acacatattt tctgttgact ttatcttttt gtaggactaa 540
 cttcattaat aactttgtct gtgagcacgc tgccattgtt gctgtgtcct gctctgacct 600
 ctacatgagc cagaaggcca ttttagtttc tgcaacattc aatgaaataa gcagcctggg 660
 gatcattctc acttcctatg ctttcatttt tatcactgtc atgaagatgc cttccactgg 720
 ggggcgcaag aaagcgttct ccacgtgtgc ctcccactg accgccatta ccattttcca 780
 tgggactatc ctttttctct actgtgttcc taactccaaa agttcatggc tcatgggtcaa 840
 ggtggcctct gtcttttaca cagtgggtcat tccatgctg aacccttga tctatagcct 900
 caggaacaaa gatgtaaaag agacagtcag gaagttagtc attaccaaatt tattatgtca 960
 taaaaatgtaa tgctagaaat attaattatt tctcttgag agcagcactg ca 1012

<210> 128
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 128
 Met Phe Ser His Arg Ile Gln Lys Asn Gln Thr Ala Gly Val Thr Phe
 1 5 10 15
 Ile Leu Leu Gly Phe Ser Glu Phe Pro Asp Leu Gln Ile Pro Leu Phe
 20 25 30
 Leu Val Phe Leu Thr Ile Tyr Thr Ile Thr Val Met Gly Asn Leu Gly
 35 40 45

Met Ile Met Val Ile Arg Ile Asn Pro Lys Leu His Thr Pro Met Tyr
 50 55 60

Phe Phe Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Thr Thr
 65 70 75 80

Ile Thr Pro Lys Leu Leu Glu Asn Leu Val Val Glu Asp Arg Ile Ile
 85 90 95

Ser Phe Thr Gly Cys Ile Met Gln Phe Phe Phe Ala Cys Ile Phe Val
 100 105 110

Val Thr Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val
 115 120 125

Ala Val Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu
 130 135 140

Cys Ser Leu Leu Val Ala Ala Ser Tyr Ser Trp Ser Leu Val Cys Ser
 145 150 155 160

Leu Thr Tyr Thr Tyr Phe Leu Leu Thr Leu Ser Phe Cys Arg Thr Asn
 165 170 175

Phe Ile Asn Asn Phe Val Cys Glu His Ala Ala Ile Val Ala Val Ser
 180 185 190

Cys Ser Asp Pro Tyr Met Ser Gln Lys Val Ile Leu Val Ser Ala Thr
 195 200 205

Phe Asn Glu Ile Ser Ser Leu Val Ile Ile Leu Thr Ser Tyr Ala Phe
 210 215 220

Ile Phe Ile Thr Val Met Lys Met Pro Ser Thr Gly Gly Arg Lys Lys
 225 230 235 240

Ala Phe Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His
 245 250 255

Gly Thr Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Ser Ser Trp
 260 265 270

Leu Met Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met
 275 280 285

Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Thr
 290 295 300

Val Arg Lys Leu Val Ile Thr Lys Leu Leu Cys His Lys Met
 305 310 315

<210> 129
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 129
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 attaccaga actgcaagtc ccactcttcc tgggttttct ggccatctac aatgtcactg 120
 tgctagggaa tattgggttg attgtgatca tcaaaatcaa ccccaaactg cataccccca 180
 tgtacttttt cctcagccaa ctctcctttg tggatttctg ctattcctcc atcattgctc 240
 ccaagatggt ggtgaacctt gttgtcaaag acagaacat ttcattttta ggatgcgtag 300
 tacaattctt tttcttctgt acctttgtgg tcaactgaatc ctttttatta gctgtgatgg 360
 cctatgaccg cttcgtggcc atttgcaacc ctctgctcta cacagttgac atgtcccaga 420
 aactctgcgt gctgctggtt gtgggaccc atgcctgggg agtctcatgt tccttggaac 480
 tgacgtgctc tgcttttaaag ttatgttttc atggtttcaa cacaatcaat cacttcttct 540
 gtgagttctc ctactactc tccctttctt gctctgatac ttacatcaac cagtggctgc 600
 tattctttct tgccaccttt aatgaaatca gcacactact catcgttctc acatcttatg 660
 cgttcattgt tgtaaccatc ctcaagatgc gttcagtcag tgggcgcgcgc aaagccttct 720
 ccacctgtgc ctccacctg actgccatca ccactttcca tggcaccatc ctcttccttt 780
 actgtgtgcc caactccaaa aactccaggc acacagtcaa agtggcctct gtgttttaca 840
 ccgtggtgat ccccatgttg aatccctga tctacagtct gagaaataaa gatgtcaagg 900
 atacagtcac cgagatactg gacaccaag tcttctctta ctgagcct 948

<210> 130
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 130
 Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
 1 5 10 15
 Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
 20 25 30
 Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
 35 40 45
 Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro

65		70		75		80
Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu						
	85		90		95	
Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu						
	100		105		110	
Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys						
	115		120		125	
Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu						
	130		135		140	
Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu						
	145		150		155	160
Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn						
	165		170		175	
His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp						
	180		185		190	
Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu						
	195		200		205	
Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val						
	210		215		220	
Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser						
	225		230		235	240
Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile						
	245		250		255	
Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val						
	260		265		270	
Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro						
	275		280		285	
Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu						
	290		295		300	
Ile Leu Asp Thr Lys Val Phe Ser Tyr						
	305		310			

<210> 131
 <211> 989
 <212> DNA
 <213> Homo sapiens

<400> 131
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 aatatccaga gctccagctt tttctgttcc tgctctgcct catcatgtac atgataatcc 120
 tcctgggaaa tagcctcctc attatcatca ccactcttga ttctcgctc catactccca 180
 tgtatttctt tcttggaac ctctcattct tggacatctg ttacacatcc tcatccattc 240
 ctccaatgct tattatattt atgtctgaga gaaaatccat ctccttcatt ggctgtgctc 300
 tgcagatggt tgtgtccctt ggcttgggct ccactgagtg tgtcctcctg gctgtgatgg 360
 cctatgacca ctatgtggcc atctgcaacc cactgaggta ctccatcatc atgaacggag 420
 tgctgtatgt gcaaatggct gcatggctct ggatcatagg ctgtctgacc tccctattgc 480
 aaacagttct gacaatgatg ttgcctttct gtgggaataa tgtcattgat catattacct 540
 gtgaaatttt ggcccttcta aaactgtttt gttcagatat caccatcaat gtgcttatca 600
 tgacagtgac aaatattggt tcaactgtga ttcttctact gttaattttc atctcctatg 660
 tgtttattct ctcttccatc ctgagaatta attgtgctga gggaagaaag aaagccttct 720
 ctacctgttc agcgcaactg attgtggtca tcttattcta cggttcagcc ctttttatgt 780
 acatgaaacc caagtcaaag aacactaata catctgatga gattattggg ctgtcctatg 840
 gagtggttaag cccaatgtta aatcccatca tctatagcct caggaataaa gaggtcaaag 900
 aggctgtaaa gaaagtcctg agcagacatc tgcatttatt gaaaatgtga aaaaccttgg 960
 gcatgcgata tcctcaatgg ggcaagaga 989

<210> 132
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 132
 Met Glu Thr Arg Asn Tyr Ser Ala Met Thr Glu Phe Phe Leu Val Gly
 1 5 10 15
 Leu Ser Gln Tyr Pro Glu Leu Gln Leu Phe Leu Phe Leu Leu Cys Leu
 20 25 30
 Ile Met Tyr Met Ile Ile Leu Leu Gly Asn Ser Leu Leu Ile Ile Ile
 35 40 45
 Thr Ile Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Ile Pro Pro
 65 70 75 80
 Met Leu Ile Ile Phe Met Ser Glu Arg Lys Ser Ile Ser Phe Ile Gly
 85 90 95

Cys Ala Leu Gln Met Val Val Ser Leu Gly Leu Gly Ser Thr Glu Cys
 100 105 110
 Val Leu Leu Ala Val Met Ala Tyr Asp His Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Ser Ile Ile Met Asn Gly Val Leu Tyr Val Gln Met
 130 135 140
 Ala Ala Trp Ser Trp Ile Ile Gly Cys Leu Thr Ser Leu Leu Gln Thr
 145 150 155 160
 Val Leu Thr Met Met Leu Pro Phe Cys Gly Asn Asn Val Ile Asp His
 165 170 175
 Ile Thr Cys Glu Ile Leu Ala Leu Leu Lys Leu Val Cys Ser Asp Ile
 180 185 190
 Thr Ile Asn Val Leu Ile Met Thr Val Thr Asn Ile Val Ser Leu Val
 195 200 205
 Ile Leu Leu Leu Leu Ile Phe Ile Ser Tyr Val Phe Ile Leu Ser Ser
 210 215 220
 Ile Leu Arg Ile Asn Cys Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Ser Ile Val Val Ile Leu Phe Tyr Gly Ser Ala Leu
 245 250 255
 Phe Met Tyr Met Lys Pro Lys Ser Lys Asn Thr Asn Thr Ser Asp Glu
 260 265 270
 Ile Ile Gly Leu Ser Tyr Gly Val Val Ser Pro Met Leu Asn Pro Ile
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Val Lys Lys Val
 290 295 300
 Leu Ser Arg His Leu His Leu Leu Lys Met
 305 310

<210> 133

<211> 990

<212> DNA

<213> Homo sapiens

<400> 133

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acatggagac aagaaattac tctgccatga ctgaattctt tctggtgggg ctttcccaat 60
atccagagct ccagcttttt ctgttcctgc tctgcctcat catgtacatg ataatcctcc 120
tgggaaatag cctcctcatt atcatcacca tcttggaattc tcgcctccat actcccatgt 180
atctctttct tggaaacctc tcattcttgg acatctgtta cacatcctca tccattcctc 240
caatgcttat tatatttatg tctgagagaa aatccatctc cttcattggc tgtgctctgc 300
agatggttgt gtcccttggc ttgggctcca ctgagtgtgt cctcctggct gtgatggcct 360
atgaccacta tgtggccatc tgcaaccac tgagggtactc catcatcatg aacggagtgc 420
tgtatgtgca aatggctgca tggtcctgga tcataggctg tctgacctcc ctattgcaca 480
cagttctgac aatgatgttg cctttctgtg ggaataatgt cattgatcat attacctgtg 540
aaattttggc ccttctaaaa cttgtttgtt cagatatcac catcaatgtg cttatcatga 600
cagtacaaa tattgtttca ctggtgattc ttctactgtt aattttcatc tcctatgtgt 660
ttattctctc ttccatcctg agaattaatt gtgctgaggg aagaaagaaa gccttctcta 720
cctgttcagc gcactcgatt gtggtcatct tattctacgg ttcagccctt tttatgtaca 780
tgaaacccaa gtcaaagaac actaatacat ctgatgagat tattgggctg tcttatggag 840
tggttaagccc aatgttaaat cccatcatct atagcctcag gaataaagag gtcaaagagg 900
ctgtaaagaa agtcctgagc agacatctgc atttattgaa aatgtgaaaa accttgggca 960
tgcatatcc tcaatggggc aagagagctt                                     990
```

<210> 134

<211> 314

<212> PRT

<213> Homo sapiens

<400> 134

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Met Glu Thr Arg Asn Tyr Ser Ala Met Thr Glu Phe Phe Leu Val Gly
  1              5              10              15

Leu Ser Gln Tyr Pro Glu Leu Gln Leu Phe Leu Phe Leu Leu Cys Leu
          20              25              30

Ile Met Tyr Met Ile Ile Leu Leu Gly Asn Ser Leu Leu Ile Ile Ile
      35              40              45

Thr Ile Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
    50              55              60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Ile Pro Pro
  65              70              75              80

Met Leu Ile Ile Phe Met Ser Glu Arg Lys Ser Ile Ser Phe Ile Gly
          85              90              95

Cys Ala Leu Gln Met Val Val Ser Leu Gly Leu Gly Ser Thr Glu Cys
      100              105              110
```

Val Leu Leu Ala Val Met Ala Tyr Asp His Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Ser Ile Ile Met Asn Gly Val Leu Tyr Val Gln Met
130 135 140

Ala Ala Trp Ser Trp Ile Ile Gly Cys Leu Thr Ser Leu Leu His Thr
145 150 155 160

Val Leu Thr Met Met Leu Pro Phe Cys Gly Asn Asn Val Ile Asp His
165 170 175

Ile Thr Cys Glu Ile Leu Ala Leu Leu Lys Leu Val Cys Ser Asp Ile
180 185 190

Thr Ile Asn Val Leu Ile Met Thr Val Thr Asn Ile Val Ser Leu Val
195 200 205

Ile Leu Leu Leu Leu Ile Phe Ile Ser Tyr Val Phe Ile Leu Ser Ser
210 215 220

Ile Leu Arg Ile Asn Cys Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Ser Ile Val Val Ile Leu Phe Tyr Gly Ser Ala Leu
245 250 255

Phe Met Tyr Met Lys Pro Lys Ser Lys Asn Thr Asn Thr Ser Asp Glu
260 265 270

Ile Ile Gly Leu Ser Tyr Gly Val Val Ser Pro Met Leu Asn Pro Ile
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Val Lys Lys Val
290 295 300

Leu Ser Arg His Leu His Leu Leu Lys Met
305 310

<210> 135

<211> 954

<212> DNA

<213> Homo sapiens

<400> 135

aacacatgaa aaataagaac aatgtgactg aatttatacct cttagggctc acacagaacc 60
ctgaggggca aaagggttta ttgtcacat tcttactaat ctacatggtg acgataatgg 120

```

gcaacctgct tatcatagtg accatcatgg ccagccagtc cctgggttcc cccatgtact 180
tttttctggc ttctttatca ttcatagata ccgtctattc tactgcattt gctcccaaaa 240
tgattgttga cttgctctct gagaaaaaga ccatttcctt tcagggttgt atggctcaac 300
tttttatgga tcatttattt gctggtgctg aagtcattct tctggtggta atggcctatg 360
atcgatacat ggccatctgt aagcctcttc atgaattgat caccatgaat cgtcgagtct 420
gtgttcttat gctgttggcg gcttggattg gaggccttct tcaactattg gttcaatttc 480
tctttattta tcagctccct ttctgtggac ccaatgtcat tgacaacttc ctgtgtgatt 540
tgtatccctt attgaaactt gcttgcacca atacctatgt cactgggctt tctatgatag 600
ctaattggagg agcgatttgt gctgtcacct tcttcaactat cctgctttcc tatgggggtca 660
tattacactc tcttaagact cagagtttgg aagggaacg aaaagctttc tacacctgtg 720
catcccacgt cactgtggtc attttattct ttgtcccctg tatcttcttg tatgaaggc 780
ccaattctac ttttccatt gataaatcca tgactgtagt tctaactttt ataactcca 840
tgctgaacc actaatctat accctgaaga atgcagaaat gaaaagtgcc atgaggaaac 900
tttgagtaa aaaagtaagc ttagctggga aatggctgta tcaactatga gaat 954

```

<210> 136

<211> 314

<212> PRT

<213> Homo sapiens

<400> 136

```

Met Lys Asn Lys Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
  1             5             10             15

```

```

Gln Asn Pro Glu Gly Gln Lys Val Leu Phe Val Thr Phe Leu Leu Ile
          20             25             30

```

```

Tyr Met Val Thr Ile Met Gly Asn Leu Leu Ile Ile Val Thr Ile Met
    35             40             45

```

```

Ala Ser Gln Ser Leu Gly Ser Pro Met Tyr Phe Phe Leu Ala Ser Leu
    50             55             60

```

```

Ser Phe Ile Asp Thr Val Tyr Ser Thr Ala Phe Ala Pro Lys Met Ile
    65             70             75             80

```

```

Val Asp Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Gln Gly Cys Met
          85             90             95

```

```

Ala Gln Leu Phe Met Asp His Leu Phe Ala Gly Ala Glu Val Ile Leu
    100            105            110

```

```

Leu Val Val Met Ala Tyr Asp Arg Tyr Met Ala Ile Cys Lys Pro Leu
    115            120            125

```

```

His Glu Leu Ile Thr Met Asn Arg Arg Val Cys Val Leu Met Leu Leu
    130            135            140

```

Ala Ala Trp Ile Gly Gly Phe Leu His Ser Leu Val Gln Phe Leu Phe
 145 150 155 160

Ile Tyr Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp Asn Phe Leu
 165 170 175

Cys Asp Leu Tyr Pro Leu Leu Lys Leu Ala Cys Thr Asn Thr Tyr Val
 180 185 190

Thr Gly Leu Ser Met Ile Ala Asn Gly Gly Ala Ile Cys Ala Val Thr
 195 200 205

Phe Phe Thr Ile Leu Leu Ser Tyr Gly Val Ile Leu His Ser Leu Lys
 210 215 220

Thr Gln Ser Leu Glu Gly Lys Arg Lys Ala Phe Tyr Thr Cys Ala Ser
 225 230 235 240

His Val Thr Val Val Ile Leu Phe Phe Val Pro Cys Ile Phe Leu Tyr
 245 250 255

Ala Arg Pro Asn Ser Thr Phe Pro Ile Asp Lys Ser Met Thr Val Val
 260 265 270

Leu Thr Phe Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Lys
 275 280 285

Asn Ala Glu Met Lys Ser Ala Met Arg Lys Leu Trp Ser Lys Lys Val
 290 295 300

Ser Leu Ala Gly Lys Trp Leu Tyr His Ser
 305 310

<210> 137

<211> 934

<212> DNA

<213> Homo sapiens

<400> 137

aaaacacccat ggaaacaggg aacctcacgt gggatcaga ctttgtcttc ctggggctct 60
 cgcagactcg ggagctccag cgtttcctgt ttctaattgtt cctgtttgtc tacatcacca 120
 ctgttatggg aaacatcctt atcatcatca cagtgcctc tgattcccag ctccacacac 180
 ccatgtactt tctgctccga aacctggctg tcctagacct ctgtttctct tcagtcactg 240
 ctcccaaaat gctagtggac ctctctctg agaagaaaac catctcttac cagggtgca 300
 tgggtcagat cttcttcttc cacttttttg gaggtgccat ggtcttcttc ctctcagtga 360
 tggcctttga ccgcctcatt gccatctccc ggcccctccg ctatgtcacc gtcatgaaca 420

```

ctcagctctg ggtggggctg gtggtagcca cctgggtggg aggctttgtc cactctattg 480
tccagctggc tctgatgctc ccactgccct tctgtggccc caacattttg gataacttct 540
actgtgatgt tccccaagta ctgagacttg cctgcactga cacctcactg ctggagttcc 600
tcaagatctc caacagtggg ctgctggatg tcgtctggtt cttctctctc ctgatgtcct 660
acttattcat cctggtgatg ctgaggtcac atccagggga ggcaagaagg aaggcagctt 720
ccacctgcac caccacatc atcgtgggtt ccatgatctt cgttccaagc atttacctct 780
atgcccggcc cttactcca ttccctatgg acaagcttgt gtccatcggc cacacagtca 840
tgaccccat gctcaacccc atgatctata ccctgaggaa ccaggacatg caggcagcag 900
tgagaagatt agggagacac cggctgggtt gaga 934

```

<210> 138

<211> 308

<212> PRT

<213> Homo sapiens

<400> 138

```

Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
  1              5              10              15

```

```

Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu
          20              25              30

```

```

Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
      35              40              45

```

```

Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
      50              55              60

```

```

Asn Leu Ala Leu Leu Asp Ala Ser Tyr Ser Phe Ile Val Val Pro Arg
      65              70              75              80

```

```

Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Ser
          85              90              95

```

```

Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Ala Gly Glu Met
      100              105              110

```

```

Phe Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
      115              120              125

```

```

Pro Leu His Tyr Ser Thr Ile Met Asn Pro Arg Ala Cys Tyr Ala Leu
      130              135              140

```

```

Ser Leu Val Leu Trp Leu Gly Gly Phe Ile His Ser Ile Val Gln Val
      145              150              155              160

```

```

Ala Leu Ile Leu His Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn

```

	165		170		175
Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asn Thr					
	180		185		190
Phe Val Val Glu Leu Leu Met Val Ser Asn Ser Gly Leu Leu Ser Leu					
	195		200		205
Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg					
	210		215		220
Ile Arg Glu His Ser Ser Glu Gly Lys Ser Lys Ala Ile Ser Thr Cys					
225		230		235	240
Thr Thr His Ile Ile Ile Ile Phe Leu Met Phe Gly Pro Ala Ile Phe					
	245		250		255
Ile Tyr Thr Cys Pro Phe Gln Ala Phe Pro Ala Asp Lys Val Val Ser					
	260		265		270
Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Val Ile Tyr Thr					
	275		280		285
Leu Arg Asn Gln Glu Val Lys Ala Ser Met Arg Lys Leu Leu Ser Gln					
	290		295		300
His Met Phe Cys					
305					

<210> 139
 <211> 957
 <212> DNA
 <213> Homo sapiens

<400> 139
 gccatgaaac tattaaatca atctcaagtg tcagaattca ttttgctggg actgaccagc 60
 tcccaggatg tagagtttct tctctttgcc ctcttctcgg ttatctatgt ggtcacagtt 120
 ttgggtaacc ttcttattat agtcacagtg ttttaacaccc ctaacctgaa tactcccatg 180
 tattttctcc ttggtaaatct ctcttttgta gatatgaccc ttgcttcttt tgccaccct 240
 aagggtgattc tgaacttggt aaaaaagcag aaggtaattt cttttgctgg gtgcttcact 300
 cagatatttc tccttcactt actgggtggg gttgaaatgg tactgttggt ctccatggct 360
 ttgacagat atgtggccat ttgtaagccc ctacactaca tgaccatcat gaacaagaag 420
 gtatgtgttt tgctttagt gacctcatgg ctcttgggtc tccttcactc agggtttcag 480
 ataccatttg ctgtgaactt gcccttttgg ggtcccaatg tggtagacag cattttttgt 540
 gacctccctt tggttactaa gcttgctgt atagacatat attttgtaca ggtagtcatt 600
 gttgccaaca gtggcataat ctccctgagc tgtttcatta ttttgcttat ctccctacagt 660
 ctgatccctca taaccattaa gaaccactct cctactgggc aatctaaagc ccgttccact 720

ttgactgctc acatcacagt ggtgattctc ttctttggcc catgcatctt tatctacatt 780
 tggcccttcg gcaaccactc tgtagataag ttccttgctg tgttttatac catcatcact 840
 cctatcttga atccaattat ctatactctg agaaacaaag aaatgaagat atccatgaaa 900
 aaactctgga gagcttttgt gaattctaga gaagatactt agattaaaaa tataatg 957

<210> 140
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 140
 Met Lys Leu Leu Asn Gln Ser Gln Val Ser Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Leu Thr Ser Ser Gln Asp Val Glu Phe Leu Leu Phe Ala Leu Phe Ser
 20 25 30
 Val Ile Tyr Val Val Thr Val Leu Gly Asn Leu Leu Ile Ile Val Thr
 35 40 45
 Val Phe Asn Thr Pro Asn Leu Asn Thr Pro Met Tyr Phe Leu Leu Gly
 50 55 60
 Asn Leu Ser Phe Val Asp Met Thr Leu Ala Ser Phe Ala Thr Pro Lys
 65 70 75 80
 Val Ile Leu Asn Leu Leu Lys Lys Gln Lys Val Ile Ser Phe Ala Gly
 85 90 95
 Cys Phe Thr Gln Ile Phe Leu Leu His Leu Leu Gly Gly Val Glu Met
 100 105 110
 Val Leu Leu Val Ser Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125
 Pro Leu His Tyr Met Thr Ile Met Asn Lys Lys Val Cys Val Leu Leu
 130 135 140
 Val Val Thr Ser Trp Leu Leu Gly Leu Leu His Ser Gly Phe Gln Ile
 145 150 155 160
 Pro Phe Ala Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser
 165 170 175
 Ile Phe Cys Asp Leu Pro Leu Val Thr Lys Leu Ala Cys Ile Asp Ile
 180 185 190

Tyr Phe Val Gln Val Val Ile Val Ala Asn Ser Gly Ile Ile Ser Leu
 195 200 205
 Ser Cys Phe Ile Ile Leu Leu Ile Ser Tyr Ser Leu Ile Leu Ile Thr
 210 215 220
 Ile Lys Asn His Ser Pro Thr Gly Gln Ser Lys Ala Arg Ser Thr Leu
 225 230 235 240
 Thr Ala His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255
 Ile Tyr Ile Trp Pro Phe Gly Asn His Ser Val Asp Lys Phe Leu Ala
 260 265 270
 Val Phe Tyr Thr Ile Ile Thr Pro Ile Leu Asn Pro Ile Ile Tyr Thr
 275 280 285
 Leu Arg Asn Lys Glu Met Lys Ile Ser Met Lys Lys Leu Trp Arg Ala
 290 295 300
 Phe Val Asn Ser Arg Glu Asp Thr
 305 310

<210> 141
 <211> 970
 <212> DNA
 <213> Homo sapiens

<400> 141
 atcaaatgga taaaaaccaa acagaagtga tgagagaatt tttcttgtca gggttctcac 60
 agacaccatc tattgaagca gggctatttg tactatttct tttcttctat atgtccattt 120
 gggttggcaa tgtcctcatc atggtcacag tagcatctga taaatacctg aattcatcac 180
 ccatgtattt ccttcttggc aacctctcat ttctggacct atgttattca acagtaacga 240
 cccctaagct tctggctgac ttctttaatc atgaaaaact catttcctat gaccaatgca 300
 ttgtgcaact cttcttctctg cattttgtag gggcagctga gatgttcctg ctcacagtga 360
 tggcgtacga tcgctatgtt gcaatctgtc gcccgctgca ctacaccact gtcattgagtc 420
 ggggggttatg ctgtgtgttg gttgctgcct cctggatggg aggatttgtg cactccactg 480
 tccagaccat tctcactgtc catctaccct tttgtgggcc aaatcaggtg gaaaactttt 540
 tttgtgatgt tccccctgtc atcaaaacttg cttgtgctga cacttttgtc attgaattgc 600
 tcatggtatc taacagtggg ttgatctcca ccatctcctt tgtggtgctg atttcctcct 660
 acaccactat cctagtaag attcgctcca aggaaggaag gcgaaaggca ctctccacgt 720
 gtgcctctca cctcatggtg gtaacactgt tttttggacc ctgtattttc atctacgctc 780
 gtcctttctc tacattttct gtggacaaga tgggtgtctgt actctacaat gttattaccc 840
 caatgctaaa cccctcatc tacacacttc ggaacaaaga ggtaaagtca gccatgcaga 900
 agctctgggt cagaaatggg cttacttggg aaaagcagga gacatgagac attgatatga 960
 atttttgaaa 970

<210> 142

<211> 313

<212> PRT

<213> Homo sapiens

<400> 142

Met Asp Lys Asn Gln Thr Glu Val Met Arg Glu Phe Phe Leu Ser Gly
1 5 10 15

Phe Ser Gln Thr Pro Ser Ile Glu Ala Gly Leu Phe Val Leu Phe Leu
20 25 30

Phe Phe Tyr Met Ser Ile Trp Val Gly Asn Val Leu Ile Met Val Thr
35 40 45

Val Ala Ser Asp Lys Tyr Leu Asn Ser Ser Pro Met Tyr Phe Leu Leu
50 55 60

Gly Asn Leu Ser Phe Leu Asp Leu Cys Tyr Ser Thr Val Thr Thr Pro
65 70 75 80

Lys Leu Leu Ala Asp Phe Phe Asn His Glu Lys Leu Ile Ser Tyr Asp
85 90 95

Gln Cys Ile Val Gln Leu Phe Phe Leu His Phe Val Gly Ala Ala Glu
100 105 110

Met Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
115 120 125

Arg Pro Leu His Tyr Thr Thr Val Met Ser Arg Gly Leu Cys Cys Val
130 135 140

Leu Val Ala Ala Ser Trp Met Gly Gly Phe Val His Ser Thr Val Gln
145 150 155 160

Thr Ile Leu Thr Val His Leu Pro Phe Cys Gly Pro Asn Gln Val Glu
165 170 175

Asn Phe Phe Cys Asp Val Pro Pro Val Ile Lys Leu Ala Cys Ala Asp
180 185 190

Thr Phe Val Ile Glu Leu Leu Met Val Ser Asn Ser Gly Leu Ile Ser
195 200 205

Thr Ile Ser Phe Val Val Leu Ile Ser Ser Tyr Thr Thr Ile Leu Val

210	215	220
Lys Ile Arg Ser Lys Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys Ala		
225	230	235 240
Ser His Leu Met Val Val Thr Leu Phe Phe Gly Pro Cys Ile Phe Ile		
	245	250 255
Tyr Ala Arg Pro Phe Ser Thr Phe Ser Val Asp Lys Met Val Ser Val		
	260	265 270
Leu Tyr Asn Val Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu		
	275	280 285
Arg Asn Lys Glu Val Lys Ser Ala Met Gln Lys Leu Trp Val Arg Asn		
	290	295 300
Gly Leu Thr Trp Lys Lys Gln Glu Thr		
305	310	

<210> 143
 <211> 928
 <212> DNA
 <213> Homo sapiens

<400> 143
 agtaaatgaa tcttaaaaat ggatctctag tgaccgagtt tattttacta ggattttttg 60
 gacgatggga acttcaaatt ttcttctttg tgacattttc cctgatctac ggtgctactg 120
 tgggtgggaa cattctcatt atggtcacag tgacatgtag ttcgaccctt cattctccct 180
 tgtactttct ccttggaat ctctcttttt tggacatgtg tctctccact gccacaacac 240
 ccaagatgat ccacaagacc atctctgtgt ggggctgctg gaccagaag ttcttcatgc 300
 acttcttttg gagtgctgag atgactcttc tgataatcat ggcttttgac aggtatgtag 360
 ccatatgtaa accctgcac tataggacaa tcatgagcca caagctgcta aaggggtttg 420
 cgatactttc atggataatt ggtttttttac actccataag ccagatagtt ttaacaatga 480
 acttgccttt ctgtggccac aatgtcataa acaacatatt ttgtgatctt ccccttgtga 540
 tcaagcttgc ttgcattgaa acatacacc tggaattatt tgcattgct gacagcgggc 600
 tgctctcttt cacctgtttc atcctcttgc ttgtttctta cattgtcatc ctggtcagtg 660
 taccaaaaaa atcatcacat gggctctcca aggcgctgtc cacattgtct gccacatca 720
 ttgtggtcac tctgttcttt ggaccttgta tttttatcta tgtttggcca ttcagtagtt 780
 tggcaagcaa taaaactctt gctgtatttt atacagttat cacaccgtta ctgaatccga 840
 gtattttata cctgagaaat aagaaaatgc aagaggccat aagaaaatta cggttccaat 900
 atgttagttc tgcacagaat ttctagat 928

<210> 144
 <211> 306
 <212> PRT

<213> Homo sapiens

<400> 144

Met Asn Leu Lys Asn Gly Ser Leu Val Thr Glu Phe Ile Leu Leu Gly
1 5 10 15
Phe Phe Gly Arg Trp Glu Leu Gln Ile Phe Phe Phe Val Thr Phe Ser
20 25 30
Leu Ile Tyr Gly Ala Thr Val Val Gly Asn Ile Leu Ile Met Val Thr
35 40 45
Val Thr Cys Ser Ser Thr Leu His Ser Pro Leu Tyr Phe Leu Leu Gly
50 55 60
Asn Leu Ser Phe Leu Asp Met Cys Leu Ser Thr Ala Thr Thr Pro Lys
65 70 75 80
Met Ile His Lys Thr Ile Ser Val Trp Gly Cys Val Thr Gln Lys Phe
85 90 95
Phe Met His Phe Phe Gly Ser Ala Glu Met Thr Leu Leu Ile Ile Met
100 105 110
Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr Arg Thr
115 120 125
Ile Met Ser His Lys Leu Leu Lys Gly Phe Ala Ile Leu Ser Trp Ile
130 135 140
Ile Gly Phe Leu His Ser Ile Ser Gln Ile Val Leu Thr Met Asn Leu
145 150 155 160
Pro Phe Cys Gly His Asn Val Ile Asn Asn Ile Phe Cys Asp Leu Pro
165 170 175
Leu Val Ile Lys Leu Ala Cys Ile Glu Thr Tyr Thr Leu Glu Leu Phe
180 185 190
Val Ile Ala Asp Ser Gly Leu Leu Ser Phe Thr Cys Phe Ile Leu Leu
195 200 205
Leu Val Ser Tyr Ile Val Ile Leu Val Ser Val Pro Lys Lys Ser Ser
210 215 220
His Gly Leu Ser Lys Ala Leu Ser Thr Leu Ser Ala His Ile Ile Val
225 230 235 240

Val Thr Leu Phe Phe Gly Pro Cys Ile Phe Ile Tyr Val Trp Pro Phe
245 250 255

Ser Ser Leu Ala Ser Asn Lys Thr Leu Ala Val Phe Tyr Thr Val Ile
260 265 270

Thr Pro Leu Leu Asn Pro Ser Ile Tyr Thr Leu Arg Asn Lys Lys Met
275 280 285

Gln Glu Ala Ile Arg Lys Leu Arg Phe Gln Tyr Val Ser Ser Ala Gln
290 295 300

Asn Phe
305

<210> 145
<211> 965
<212> DNA
<213> Homo sapiens

<400> 145
tctgaaacct gaggcaatgg acccacagaa ctattccttg gtgtcagaat ttgtgttgca 60
tggactctgc acttcacgac atcttcaaaa ttttttcttt atatttttct ttgggggtcta 120
tgtggccatt atgctgggta accttctcat tttggctact gtaatttctg atccctgcct 180
gcaactcctcc cctatgtact tcctgctggg gaacctagct ttccctggaca tgtggctggc 240
ctcatttgcc actcccaaga tgatcaggga tttccttagt gatcaaaaac tcatctcctt 300
tggaggatgt atggctcaaa tcttcttctt gcactttact ggtggggctg agatggtgct 360
cctgggtttcc atggcctatg acagatatgt ggccatatgc aaacccttgc attacatgac 420
tttgatgagt tggcagactt gcatcaggct ggtgctggct tcatgggtcg ttggatttgt 480
gcaactccatc agtcaagtgg ctttctactgt aaatttgcct tactgtggcc ccaatgaggt 540
agacagcttc tctgtgacc tcctctggt gatcaaactt gcctgcatgg acacctatgt 600
cttgggtata attatgatct cagacagtgg gttgctttcc ttgagctgtt ttctgctcct 660
cctgatctcc tacaccgtga tcctcctcgc tatcagacag cgtgctgccg gtagcacatc 720
caaagcactc tccacttgct ctgcacatat catggtagtg acgctgttct ttggcccttg 780
catttttggt tatgtgcggc ctttcagtag gttctctgtg gacaagctgc tgtctgtgtt 840
ttataccatt ttactccac tcctgaacct cattatctac acattgagaa atgaggagat 900
gaaagcagct atgaagaaac tgcaaaaccg acgggtgact tttcaatgaa atccagcctt 960
ccata 965

<210> 146
<211> 310
<212> PRT
<213> Homo sapiens

<400> 146
Met Asp Pro Gln Asn Tyr Ser Leu Val Ser Glu Phe Val Leu His Gly

1	5	10	15
Leu Cys Thr Ser Arg His Leu Gln Asn Phe Phe Phe Ile Phe Phe Phe			
20	25	30	
Gly Val Tyr Val Ala Ile Met Leu Gly Asn Leu Leu Ile Leu Val Thr			
35	40	45	
Val Ile Ser Asp Pro Cys Leu His Ser Ser Pro Met Tyr Phe Leu Leu			
50	55	60	
Gly Asn Leu Ala Phe Leu Asp Met Trp Leu Ala Ser Phe Ala Thr Pro			
65	70	75	80
Lys Met Ile Arg Asp Phe Leu Ser Asp Gln Lys Leu Ile Ser Phe Gly			
85	90	95	
Gly Cys Met Ala Gln Ile Phe Phe Leu His Phe Thr Gly Gly Ala Glu			
100	105	110	
Met Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys			
115	120	125	
Lys Pro Leu His Tyr Met Thr Leu Met Ser Trp Gln Thr Cys Ile Arg			
130	135	140	
Leu Val Leu Ala Ser Trp Val Val Gly Phe Val His Ser Ile Ser Gln			
145	150	155	160
Val Ala Phe Thr Val Asn Leu Pro Tyr Cys Gly Pro Asn Glu Val Asp			
165	170	175	
Ser Phe Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Met Asp			
180	185	190	
Thr Tyr Val Leu Gly Ile Ile Met Ile Ser Asp Ser Gly Leu Leu Ser			
195	200	205	
Leu Ser Cys Phe Leu Leu Leu Leu Ile Ser Tyr Thr Val Ile Leu Leu			
210	215	220	
Ala Ile Arg Gln Arg Ala Ala Gly Ser Thr Ser Lys Ala Leu Ser Thr			
225	230	235	240
Cys Ser Ala His Ile Met Val Val Thr Leu Phe Phe Gly Pro Cys Ile			
245	250	255	
Phe Val Tyr Val Arg Pro Phe Ser Arg Phe Ser Val Asp Lys Leu Leu			

Leu Ile Tyr Gly Ala Thr Val Met Gly Asn Ile Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Arg Ser Thr Leu His Ser Pro Leu Tyr Phe Leu Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Met Cys Leu Ser Thr Ala Thr Thr Pro Lys
 65 70 75 80
 Met Ile Ile Asp Leu Leu Thr Asp His Lys Thr Ile Ser Val Trp Gly
 85 90 95
 Cys Val Thr Gln Met Phe Phe Met His Phe Phe Gly Gly Ala Glu Met
 100 105 110
 Thr Leu Leu Ile Ile Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125
 Pro Leu His Tyr Arg Thr Ile Met Ser His Lys Leu Leu Lys Gly Phe
 130 135 140
 Ala Ile Leu Ser Trp Ile Ile Gly Phe Leu His Ser Ile Ser Gln Ile
 145 150 155 160
 Val Leu Thr Met Asn Leu Pro Phe Cys Gly His Asn Val Ile Asn Asn
 165 170 175
 Ile Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Ile Glu Thr
 180 185 190
 Tyr Thr Leu Glu Leu Phe Val Ile Ala Asp Ser Gly Leu Leu Ser Phe
 195 200 205
 Thr Cys Phe Ile Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Val Ser
 210 215 220
 Val Pro Lys Lys Ser Ser His Gly Leu Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240
 Ser Ala His Ile Ile Val Val Thr Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255
 Ile Tyr Val Trp Pro Phe Ser Ser Leu Ala Ser Asn Lys Thr Leu Ala
 260 265 270
 Val Phe Tyr Thr Val Ile Thr Pro Leu Leu Asn Pro Ser Ile Tyr Thr
 275 280 285

Leu Arg Asn Lys Lys Met Gln Glu Ala Ile Arg Lys Leu Arg Phe Gln
 290 295 300

Tyr Val Ser Ser Ala Gln Asn Phe
 305 310

<210> 149
 <211> 1011
 <212> DNA
 <213> Homo sapiens

<400> 149
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 catcacaaat cgctgggacc tgcgtgtggc cctcttcctg acctgcctgc ctgtctacct 120
 ggtgagcctg ctgggaaaca tgggcatggc gctgctgac cgcatggatg cccggctcca 180
 cacacctatg tacttcttcc tggccaacct ctccctgctg gatgcctgct attcctccgc 240
 catcggcccc aagatgctag tggacctgct gctgccccga gccaccatcc cttacacagc 300
 ctgtgccctc cagatgtttg tctttgcagg tctggctgat actgagtgtt gcttgctggc 360
 agccatggcc tatgaccgct acgtggccat cagaaacca cttctctata caacagctat 420
 gtcgcagcgt ctatgcctgg ccttgctggg agcatcaggc ctgggtgggg cagtgagtgc 480
 ctttgttcac acaacctca ccttcgcct gagcttctgc cgctcccgga agatcaatag 540
 cttcttctgc gatatccctc cactgctggc catctcgtgc agtgacacca gtctcaatga 600
 actccttctc ttcgccatct gtggcttcat ccagacagcc acggtgttag ctatcacggt 660
 gtcttatggc ttcacgctg gggctgtgat ccacatgcgc tcggtcgagg gcagtcggcg 720
 agcagcctcc accggtggtt cccacctcac agcgtggcc atgatgtacg ggacactcat 780
 tttcatgtac ctgcgcccc agtccagcta tgccctggac actgacaaga tggcctctgt 840
 gttctatacc ctggatcatc cgtctctcaa cccactcatc tacagcctcc gcaataagga 900
 ggtcaaggag gccctcaggc agacctggag ccgattccac tgtccagggc aggggtccca 960
 gtgattggtc caggagggtt gggtaggtct gactatgagg ggatgaggaa g 1011

<210> 150
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 150
 Met Asn Ser Glu Asn Leu Thr Arg Ala Ala Val Ala Pro Ala Glu Phe
 1 5 10 15

Val Leu Leu Gly Ile Thr Asn Arg Trp Asp Leu Arg Val Ala Leu Phe
 20 25 30

Leu Thr Cys Leu Pro Val Tyr Leu Val Ser Leu Leu Gly Asn Met Gly
 35 40 45

Met Ala Leu Leu Ile Arg Met Asp Ala Arg Leu His Thr Pro Met Tyr

50	55	60
Phe Phe Leu Ala Asn Leu Ser Leu Leu Asp Ala Cys Tyr Ser Ser Ala		
65	70	75 80
Ile Gly Pro Lys Met Leu Val Asp Leu Leu Leu Pro Arg Ala Thr Ile		
	85	90 95
Pro Tyr Thr Ala Cys Ala Leu Gln Met Phe Val Phe Ala Gly Leu Ala		
	100	105 110
Asp Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val		
	115	120 125
Ala Ile Arg Asn Pro Leu Leu Tyr Thr Thr Ala Met Ser Gln Arg Leu		
	130	135 140
Cys Leu Ala Leu Leu Gly Ala Ser Gly Leu Gly Gly Ala Val Ser Ala		
145	150	155 160
Phe Val His Thr Thr Leu Thr Phe Arg Leu Ser Phe Cys Arg Ser Arg		
	165	170 175
Lys Ile Asn Ser Phe Phe Cys Asp Ile Pro Pro Leu Leu Ala Ile Ser		
	180	185 190
Cys Ser Asp Thr Ser Leu Asn Glu Leu Leu Leu Phe Ala Ile Cys Gly		
	195	200 205
Phe Ile Gln Thr Ala Thr Val Leu Ala Ile Thr Val Ser Tyr Gly Phe		
	210	215 220
Ile Ala Gly Ala Val Ile His Met Arg Ser Val Glu Gly Ser Arg Arg		
225	230	235 240
Ala Ala Ser Thr Gly Gly Ser His Leu Thr Ala Val Ala Met Met Tyr		
	245	250 255
Gly Thr Leu Ile Phe Met Tyr Leu Arg Pro Ser Ser Ser Tyr Ala Leu		
	260	265 270
Asp Thr Asp Lys Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Ser		
	275	280 285
Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala		
	290	295 300
Leu Arg Gln Thr Trp Ser Arg Phe His Cys Pro Gly Gln Gly Ser Gln		

305

310

315

320

<210> 151

<211> 910

<212> DNA

<213> Homo sapiens

<400> 151

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tgggggggctt tgggactaac atctcaagta ctaccagctt cactctaaca ggcttccctg 60
agatgaagggt tctggagcac tggctggctg cccttctgct gctgctttat gctatttcct 120
tcctgggcaa catcctcatc ctctttatca taaaggaaga gcagagcttg caccagccaa 180
tgtactactt cctgtctctt ttttctgtta atgacctggg tgtgtccttt tctacattgc 240
ccactgtact ggctgctgtg tgttttcatg cccagagac aacttttgat gcctgcctgg 300
cccagatggt cttcatccac ttttcctcct ggacagagtt tggcatccta ctggccatga 360
gttttgacca ctatgtggcc atctgtaacc cgctgcgcta tgccacagtg ctactgatg 420
tccgtgtggc ccacaatggc atatccattg tcatcgcag cttctgcatg gtattccac 480
ttcccttcct cctgaagaga ctgcctttct gtaaggccag tgtggtactg gccatttcct 540
actgtctgca tgcagacctg attcggctgc cctggggaga cactaccatc aacagcatgt 600
atggcctggt cattgtcatc tctgcctttg gtgtagattc actgtcatc ctctctcct 660
atgtgctcat tctgcgttct gtgctggcca ttgcctccag gggtgagagg ctttaagacac 720
tcaacacatg tgtgtcacat atctatgcag tgctgatctt ctatgtgcct atggttggtg 780
tgtccatggt tcatcgattt gggaggcatg ctctgaata tgtgcacaag ttcattgtctc 840
tttgtacctc caatgctcta cccaattatc tattccatca agactaagga gattcgcagg 900
agactacaca                                     910

```

<210> 152

<211> 294

<212> PRT

<213> Homo sapiens

<400> 152

```

Gly Gly Phe Gly Thr Asn Ile Ser Ser Thr Thr Ser Phe Thr Leu Thr
  1             5             10             15

Gly Phe Pro Glu Met Lys Gly Leu Glu His Trp Leu Ala Ala Leu Leu
      20             25             30

Leu Leu Leu Tyr Ala Ile Ser Phe Leu Gly Asn Ile Leu Ile Leu Phe
      35             40             45

Ile Ile Lys Glu Glu Gln Ser Leu His Gln Pro Met Tyr Tyr Phe Leu
      50             55             60

```

Ser Leu Phe Ser Val Asn Asp Leu Gly Val Ser Phe Ser Thr Leu Pro
 65 70 75 80
 Thr Val Leu Ala Ala Val Cys Phe His Ala Pro Glu Thr Thr Phe Asp
 85 90 95
 Ala Cys Leu Ala Gln Met Phe Phe Ile His Phe Ser Ser Trp Thr Glu
 100 105 110
 Phe Gly Ile Leu Leu Ala Met Ser Phe Asp His Tyr Val Ala Ile Cys
 115 120 125
 Asn Pro Leu Arg Tyr Ala Thr Val Leu Thr Asp Val Arg Val Ala His
 130 135 140
 Asn Gly Ile Ser Ile Val Ile Arg Ser Phe Cys Met Val Phe Pro Leu
 145 150 155 160
 Pro Phe Leu Leu Lys Arg Leu Pro Phe Cys Lys Ala Ser Val Val Leu
 165 170 175
 Ala His Ser Tyr Cys Leu His Ala Asp Leu Ile Arg Leu Pro Trp Gly
 180 185 190
 Asp Thr Thr Ile Asn Ser Met Tyr Gly Leu Phe Ile Val Ile Ser Ala
 195 200 205
 Phe Gly Val Asp Ser Leu Leu Ile Leu Leu Ser Tyr Val Leu Ile Leu
 210 215 220
 Arg Ser Val Leu Ala Ile Ala Ser Arg Gly Glu Arg Leu Lys Thr Leu
 225 230 235 240
 Asn Thr Cys Val Ser His Ile Tyr Ala Val Leu Ile Phe Tyr Val Pro
 245 250 255
 Met Val Gly Val Ser Met Val His Arg Phe Gly Arg His Ala Pro Glu
 260 265 270
 Tyr Val His Lys Phe Met Ser Leu Cys Thr Ser Asn Ala Leu Pro Asn
 275 280 285
 Tyr Leu Phe His Gln Asp
 290

<210> 153

<211> 975

<212> DNA

<213> Homo sapiens

<400> 153

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aattatccaa ataccaaact ggatttcgag caagtgaaca acataacgga attcatcttg 60
cttggcctga cacagaacgc agaggcacag aaactcttgt ttgctgtgtt tacactcatc 120
tactttctca ccatggtaga caacctaatc attgtggtga caatcaccac cagcccagcc 180
ctggactccc ccgtgtatTT ttttctgtct ttcttttctc tcatagatgg ctgctcctct 240
tctaccatgg cccccaaaat gatatttgac ttactcactg aaaagaaaac tatttccttc 300
agtgggtgca tgaccagct ctttgtagaa ctttctttg ggggagttga gatcattctg 360
ctcgtggtga tggcctatga ctgctatgtg gccatctgca agccctgta ctacctgac 420
acaatgaaca ggcaggtatg tggcctcctg gtggccatgg catgggtcgg gggatttctt 480
cacgctctga ttcaaTget tttaatagtc tggctgccct tctgtggccc caatgtcatt 540
gaccatttca tctgtgacct tttccctctg ctaaaactct cctgcaactga cactcacgtc 600
tttgactctt ttgttccgc caacagtggg ctgatgtgta tgctcatttt ttctattctt 660
attacctctt acgtcctaT cctctgctca cagcggaagg ctctctctac ctgcgccttc 720
catatcactg tagtcgtcct attctttgtt ccctgtatat tgggtgtacct tcgacccatg 780
atcacccctc ctattgataa agctgtgtct gtgttttata ctgtggtaac acccatgtta 840
aaccctttaa tctacaccct cagaaacaca gaggtgaaaa atgccatgaa gcagctctgg 900
agccaaataa tctggggtaa caatttgtgt gattagagaa gataaacaca gaacctactc 960
atattttaac aacag 975
```

<210> 154

<211> 311

<212> PRT

<213> Homo sapiens

<400> 154

```
Asn Tyr Pro Asn Thr Lys Leu Asp Phe Glu Gln Val Asn Asn Ile Thr
  1             5             10             15

Glu Phe Ile Leu Leu Gly Leu Thr Gln Asn Ala Glu Ala Gln Lys Leu
      20             25             30

Leu Phe Ala Val Phe Thr Leu Ile Tyr Phe Leu Thr Met Val Asp Asn
      35             40             45

Leu Ile Ile Val Val Thr Ile Thr Thr Ser Pro Ala Leu Asp Ser Pro
      50             55             60

Val Tyr Phe Phe Leu Ser Phe Phe Ser Phe Ile Asp Gly Cys Ser Ser
      65             70             75             80

Ser Thr Met Ala Pro Lys Met Ile Phe Asp Leu Leu Thr Glu Lys Lys
      85             90             95

Thr Ile Ser Phe Ser Gly Cys Met Thr Gln Leu Phe Val Glu His Phe
```

100	105	110
Phe Gly Gly Val Glu Ile Ile Leu Leu Val Val Met Ala Tyr Asp Cys		
115	120	125
Tyr Val Ala Ile Cys Lys Pro Leu Tyr Tyr Leu Ile Thr Met Asn Arg		
130	135	140
Gln Val Cys Gly Leu Leu Val Ala Met Ala Trp Val Gly Gly Phe Leu		
145	150	155
His Ala Leu Ile Gln Met Leu Leu Ile Val Trp Leu Pro Phe Cys Gly		
165	170	175
Pro Asn Val Ile Asp His Phe Ile Cys Asp Leu Phe Pro Leu Leu Lys		
180	185	190
Leu Ser Cys Thr Asp Thr His Val Phe Gly Leu Phe Val Ala Ala Asn		
195	200	205
Ser Gly Leu Met Cys Met Leu Ile Phe Ser Ile Leu Ile Thr Ser Tyr		
210	215	220
Val Leu Ile Leu Cys Ser Gln Arg Lys Ala Leu Ser Thr Cys Ala Phe		
225	230	235
His Ile Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Leu Val Tyr		
245	250	255
Leu Arg Pro Met Ile Thr Leu Pro Ile Asp Lys Ala Val Ser Val Phe		
260	265	270
Tyr Thr Val Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg		
275	280	285
Asn Thr Glu Val Lys Asn Ala Met Lys Gln Leu Trp Ser Gln Ile Ile		
290	295	300
Trp Gly Asn Asn Leu Cys Asp		
305	310	

<210> 155
 <211> 958
 <212> DNA
 <213> Homo sapiens

 <400> 155

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aacatggaaa gcaatcagac ctggatcaca gaagtcatcc tggtgggatt ccagggtggac 60
ccagctctgg agttgttcct ctttgggttt ttcttgctat tctacagctt aaccctgatg 120
ggaaatggga ttatcctggg gctcatctac ttggactcta gactgcacac acccatgtat 180
gtcttcctgt cacacctggc cattgtggac atgtcctatg cctcgagtac tgtccctaag 240
atgctagcaa atcttgtgat gcacaaaaaa gtcatctcct ttgctccttg catacttcag 300
acttttttgt atttggcgtt tgctattaca gagtgtctga ttttggatgat gatgtgctat 360
gatcggtatg tggcaatctg tcaccccttg caatacaccc tcattatgaa ctggagagtg 420
tgcaactgtcc tggcctcaac ttgctggata tttagctttc tcttggctct ggtccatatt 480
actcttattc tgaggctgcc tttttgtggc ccacaaaaga tcaaccactt tttctgtcaa 540
atcatgtccg tattcaaatt ggctgtgct gacactaggc tcaaccaggt ggtcctatct 600
gcggttctct cggtcatctt agtggggccg ctctgcctgg tgctggctct ctacttgcac 660
atcctgggtg ccatcttgag gatccagtct ggggagggcc gcagaaaggc cttctctacc 720
tgctcctccc acctctgctt ggtggggcct ttctttggca gcgccattgt catgtacatg 780
gcccccaagt caagccattc tcaagaacgg aggaagatcc tttccctgtt ttacagcctt 840
ttcaaccgga tcctgaaccc cctcatctac agccttagga atgcagaggt gaaaggggct 900
ctaaagagag tcctttggaa acagagatca atgtgaagaa tcatttgaga tctctga 958

```

<210> 156
 <211> 310
 <212> PRT
 <213> Homo sapiens

```

<400> 156
Met Glu Ser Asn Gln Thr Trp Ile Thr Glu Val Ile Leu Leu Gly Phe
  1              5              10              15

Gln Val Asp Pro Ala Leu Glu Leu Phe Leu Phe Gly Phe Phe Leu Leu
      20              25              30

Phe Tyr Ser Leu Thr Leu Met Gly Asn Gly Ile Ile Leu Gly Leu Ile
      35              40              45

Tyr Leu Asp Ser Arg Leu His Thr Pro Met Tyr Val Phe Leu Ser His
      50              55              60

Leu Ala Ile Val Asp Met Ser Tyr Ala Ser Ser Thr Val Pro Lys Met
      65              70              75              80

Leu Ala Asn Leu Val Met His Lys Lys Val Ile Ser Phe Ala Pro Cys
      85              90              95

Ile Leu Gln Thr Phe Leu Tyr Leu Ala Phe Ala Ile Thr Glu Cys Leu
      100             105             110

Ile Leu Val Met Met Cys Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
      115             120             125

```

Leu Gln Tyr Thr Leu Ile Met Asn Trp Arg Val Cys Thr Val Leu Ala
 130 135 140
 Ser Thr Cys Trp Ile Phe Ser Phe Leu Leu Ala Leu Val His Ile Thr
 145 150 155 160
 Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe
 165 170 175
 Phe Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Asp Thr Arg
 180 185 190
 Leu Asn Gln Val Val Leu Phe Ala Gly Ser Ala Phe Ile Leu Val Gly
 195 200 205
 Pro Leu Cys Leu Val Leu Val Ser Tyr Leu His Ile Leu Val Ala Ile
 210 215 220
 Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val
 245 250 255
 Met Tyr Met Ala Pro Lys Ser Ser His Ser Gln Glu Arg Arg Lys Ile
 260 265 270
 Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Ile Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val Leu
 290 295 300
 Trp Lys Gln Arg Ser Met
 305 310

<210> 157

<211> 943

<212> DNA

<213> Homo sapiens

<400> 157

catggaaggc aacaagacat ggatcacaga catcaccttg ccgcgattcc aggttggtcc 60
 agcactggag attctcctct gtggactttt ctctgccttc tatacactca cctgctggg 120
 gaatggggtc atctttggga ttatctgcct ggactgtaag cttcacacac ccatgtactt 180
 cttcctctca cacctggcca ttgttgacat atcctatgct tccaactatg tccccaagat 240
 gctgacgaat cttatgaacc aggaaagcac catctccttt ttccatgca taatgcagac 300

```

attcttgtat ttggcttttg ctacgtaga gtgtctgatt ttggtggtga tgcctatga 360
tcgctatgcg gacatctgcc accccttacg ttacaatatc ctcatgagct ggagagtgtg 420
cactgtcctg gctgtggcct cctgggtgtt cagcttcctc ctggctctgg tccctttagt 480
tctcatcctg aggctgccct tctgcgggcc tcatgaaatc aaccacttct gtgaaatcct 540
gtctgtcctc aagttagcct gtgtgacac ctggctcaac cagggtgtca tctttgcagc 600
ctgctgtgtc atcctgggtg ggccactctg cctgggtgtg gtctcctact tgcgcctcct 660
ggccgccatc ttgaggatcc agtctgggga gggccgcaga aaggccttct ccacctgtc 720
ctcccacctt tgcgtggtgg gactcttctt tggcagcgcc attgtcacgt acatggcccc 780
caagtccgc catcctgagg agcagcagaa agttctttcc ctgttttaca gccttttcaa 840
tccaatgctg aaccccctga tatatagcct aaggaatgca gaggtcaagg gcgcctgag 900
gagggcactg aggaaggaga ggctgacgtg agacatctca aag 943

```

<210> 158

<211> 309

<212> PRT

<213> Homo sapiens

<400> 158

```

Met Glu Gly Asn Lys Thr Trp Ile Thr Asp Ile Thr Leu Pro Arg Phe
  1              5              10             15

```

```

Gln Val Gly Pro Ala Leu Glu Ile Leu Leu Cys Gly Leu Phe Ser Ala
      20              25             30

```

```

Phe Tyr Thr Leu Thr Leu Leu Gly Asn Gly Val Ile Phe Gly Ile Ile
      35              40             45

```

```

Cys Leu Asp Cys Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
      50              55             60

```

```

Leu Ala Ile Val Asp Ile Ser Tyr Ala Ser Asn Tyr Val Pro Lys Met
      65              70             75             80

```

```

Leu Thr Asn Leu Met Asn Gln Glu Ser Thr Ile Ser Phe Phe Pro Cys
      85              90             95

```

```

Ile Met Gln Thr Phe Leu Tyr Leu Ala Phe Ala His Val Glu Cys Leu
      100             105            110

```

```

Ile Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Asp Ile Cys His Pro
      115             120            125

```

```

Leu Arg Tyr Asn Ile Leu Met Ser Trp Arg Val Cys Thr Val Leu Ala
      130             135            140

```

```

Val Ala Ser Trp Val Phe Ser Phe Leu Leu Ala Leu Val Pro Leu Val
      145             150            155            160

```

Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe
 165 170 175
 Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
 180 185 190
 Asn Gln Val Val Ile Phe Ala Ala Cys Val Phe Ile Leu Val Gly Pro
 195 200 205
 Leu Cys Leu Val Leu Val Ser Tyr Leu Arg Ile Leu Ala Ala Ile Leu
 210 215 220
 Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser
 225 230 235 240
 Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val Thr
 245 250 255
 Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu
 260 265 270
 Ser Leu Phe Tyr Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile Tyr
 275 280 285
 Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Arg Arg Ala Leu Arg
 290 295 300
 Lys Glu Arg Leu Thr
 305

<210> 159

<211> 938

<212> DNA

<213> Homo sapiens

<400> 159

gaatgggagt caaccaatca tgggtcacag aattcatcct ggtgggattc cagctcagtg 60
 ccgagatgga agtgctcctc ttttagatct tctccctggt atacatcttc agcctgctgg 120
 caaatggcat gatcttgga ctcatctgtc tggaccacat tctgcctacc cccatgtact 180
 tcttctctc acacctggcc atcattgaca tgtcctatgc ttccaacaat gttcccaaga 240
 tgttggaaca tctgatgaac aagaaaagaa ccatctcctt tcttccatgc ataatgcaga 300
 cctatttgta tttctctttt gctgctacag agtgctctgat tttggtggtg atgtcctatg 360
 ataggtatgt ggccatttgc caccctctcc agtacactgt catcatgagc tggagagtgt 420
 gcacgaccc tggctctcaca tccctggtcat gtgggtttgc cctgtccctg gtacatgcaa 480
 ttcttcttct aagggtgccc ttctgctggc cccgggatgt gaaccacctc ttctgtgaaa 540
 ttctgtctgt cctcaagctg gcctgttctg acacctgggt taaccaagtg gtcataattt 600

```

ctacctgtgt gtttgtctta gttggacctc tttgtttgat gcttgtctcc tacatgcaca 660
tcctctgggc catcctaaag atccagacaa aggaaggccg cataaaggcc ttctcgacct 720
gtcctccca cctgtgtgtg gttggactct tctttggcat agccatgggtg gtttacatag 780
tcccagactc taatcaacga gaggagcagg agaaaatgct gtccctgttt cacagtgtct 840
tgaaccaaat tctgaacccc ctgatctaca gtctgaggaa tgctcagggtg aagggcgccc 900
tccacagagc actgcagagg acgctgtcta tgtaagga 938

```

<210> 160

<211> 268

<212> PRT

<213> Homo sapiens

<400> 160

```

Met Ile Leu Gly Leu Ile Cys Leu Asp His Ile Leu Pro Thr Pro Met
  1             5             10             15

Tyr Phe Phe Leu Ser His Leu Ala Ile Ile Asp Met Ser Tyr Ala Ser
      20             25             30

Asn Asn Val Pro Lys Met Leu Ala Asn Leu Met Asn Lys Lys Arg Thr
      35             40             45

Ile Ser Phe Leu Pro Cys Ile Met Gln Thr Tyr Leu Tyr Phe Ser Phe
      50             55             60

Ala Ala Thr Glu Cys Leu Ile Leu Val Val Met Ser Tyr Asp Arg Tyr
      65             70             75             80

Val Ala Ile Cys His Pro Leu Gln Tyr Thr Val Ile Met Ser Trp Arg
      85             90             95

Val Cys Thr Ile Leu Ala Leu Thr Ser Trp Ser Cys Gly Phe Ala Leu
      100            105            110

Ser Leu Val His Ala Ile Leu Leu Leu Arg Leu Pro Phe Cys Gly Pro
      115            120            125

Arg Asp Val Asn His Leu Phe Cys Glu Ile Leu Ser Val Leu Lys Leu
      130            135            140

Ala Cys Ser Asp Thr Trp Val Asn Gln Val Val Ile Phe Ala Thr Cys
      145            150            155            160

Val Phe Val Leu Val Gly Pro Leu Cys Leu Met Leu Val Ser Tyr Met
      165            170            175

His Ile Leu Trp Ala Ile Leu Lys Ile Gln Thr Lys Glu Gly Arg Ile

```

180	185	190
Lys Ala Phe Ser Thr Cys Ser Ser His Leu Cys Val Val Gly Leu Phe		
195	200	205
Phe Gly Ile Ala Met Val Val Tyr Ile Val Pro Asp Ser Asn Gln Arg		
210	215	220
Glu Glu Gln Glu Lys Met Leu Ser Leu Phe His Ser Val Leu Asn Pro		
225	230	235
Ile Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Ala Gln Val Lys Gly		
245	250	255
Ala Leu His Arg Ala Leu Gln Arg Thr Leu Ser Met		
260	265	

<210> 161
 <211> 967
 <212> DNA
 <213> Homo sapiens

<400> 161
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 gcactctact gggaaatgtg tctatccttg ttgtgttat gtcttctgct cgccttcaca 180
 cacctatgta tttcttctct ggaaacttgt ctgtgtttga catgggtttc tcctcagtga 240
 cttgtcccaa aatgctgctc taccttatgg ggctgagccg actcatctcc taaaagact 300
 gtgtctgcca gcttttcttc ttccatttcc tcgggagcat tgagtgcctc ttgtttacgg 360
 tgatggccta tgaccgcttc actgccatct gttatcctct gcgatacaca gtcacatga 420
 acccaaggat ctgtgtggcc ctggctgtgg gcacatggct gttaggggtgc attcattcca 480
 gtatcttgac ctccctcacc ttcaccttgc catactgtgg tcccaatgaa gtggatcact 540
 tcttctgtga cattccagca ctgttgccct tggcctgtgc tgacacatcc ttagcccaga 600
 gggtagactt caccaacgtt ggctcatat ctcttctctg ctttctgcta attcttttat 660
 cctacactag aatcacaata tctatcttaa gcattcgtac aactgagggc cgtcgccgtg 720
 ccttctccac ctgcagtgtc cacctcattg ccacctctg tgcttatggg cccatcatca 780
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 atctggtagg accaatgtg aaccctttga tctatacctt gaggaataag gaagtaaaaa 900
 cagccctgaa aacaatattg cacaggacag gccatgttcc tgagagttag taagagcaga 960
 taaatgg 967

<210> 162
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 162

Met Glu Val Lys Asn Cys Cys Met Val Thr Glu Phe Ile Leu Leu Gly
1 5 10 15

Ile Pro His Thr Glu Gly Leu Glu Met Thr Leu Phe Val Leu Phe Leu
20 25 30

Pro Phe Tyr Ala Cys Thr Leu Leu Gly Asn Val Ser Ile Leu Val Ala
35 40 45

Val Met Ser Ser Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Val Phe Asp Met Gly Phe Ser Ser Val Thr Cys Pro Lys
65 70 75 80

Met Leu Leu Tyr Leu Met Gly Leu Ser Arg Leu Ile Ser Tyr Lys Asp
85 90 95

Cys Val Cys Gln Leu Phe Phe Phe His Phe Leu Gly Ser Ile Glu Cys
100 105 110

Phe Leu Phe Thr Val Met Ala Tyr Asp Arg Phe Thr Ala Ile Cys Tyr
115 120 125

Pro Leu Arg Tyr Thr Val Ile Met Asn Pro Arg Ile Cys Val Ala Leu
130 135 140

Ala Val Gly Thr Trp Leu Leu Gly Cys Ile His Ser Ser Ile Leu Thr
145 150 155 160

Ser Leu Thr Phe Thr Leu Pro Tyr Cys Gly Pro Asn Glu Val Asp His
165 170 175

Phe Phe Cys Asp Ile Pro Ala Leu Leu Pro Leu Ala Cys Ala Asp Thr
180 185 190

Ser Leu Ala Gln Arg Val Ser Phe Thr Asn Val Gly Leu Ile Ser Leu
195 200 205

Val Cys Phe Leu Leu Ile Leu Leu Ser Tyr Thr Arg Ile Thr Ile Ser
210 215 220

Ile Leu Ser Ile Arg Thr Thr Glu Gly Arg Arg Arg Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Leu Ile Ala Ile Leu Cys Ala Tyr Gly Pro Ile Ile
245 250 255

Thr Val Tyr Leu Gln Pro Thr Pro Asn Pro Met Leu Gly Thr Val Val
 260 265 270

Gln Ile Leu Met Asn Leu Val Gly Pro Met Leu Asn Pro Leu Ile Tyr
 275 280 285

Thr Leu Arg Asn Lys Glu Val Lys Thr Ala Leu Lys Thr Ile Leu His
 290 295 300

Arg Thr Gly His Val Pro Glu Ser
 305 310

<210> 163
 <211> 1028
 <212> DNA
 <213> Homo sapiens

<400> 163
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 tgatttattt catcactttg ttggataaatt tgggtataat tattttaatc tgggttaaag 180
 cccaacttca tactccaatg tactttcttc ttggcaacct ctctttttgt gatattctgct 240
 actctactgt ctttgctcct aagatgctag tcaatttcct atcaaaacat aagtcagta 300
 cattttctgg ctgtgttcta cagagtttcc cttttgcagt atatgtaacc acaaaggaca 360
 ttctctgtc catgatggct tatgaccatt acgtggccat agctaattccc ttgttgata 420
 cagtcattat ggcccaaaaa gtttgtattc agatggctcct tgcttcttac ttaggtgggc 480
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 atatcaatga aatgctgcc ttggtcttct ctgggctcat tgcaatgttc actttcattg 660
 tcattatggt gtcttatatc tgcacatca ttgccatcca gagaatccat gcagctgagg 720
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 ctttaaaa 1028

<210> 164
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 164
 Met Lys Thr Arg Gly Trp Asn His Thr Gly Ala Lys Glu Phe Leu Leu
 1 5 10 15

Val Gly Leu Thr Glu Asn Pro Asn Leu Gln Ile Pro Leu Phe Leu Leu
 20 25 30

Val Thr Leu Ile Tyr Phe Ile Thr Leu Leu Asp Asn Leu Gly Ile Ile
 35 40 45

Ile Leu Ile Trp Leu Asn Ala Gln Leu His Thr Pro Met Tyr Phe Phe
 50 55 60

Leu Gly Asn Leu Ser Phe Cys Asp Ile Cys Tyr Ser Thr Val Phe Ala
 65 70 75 80

Pro Lys Met Leu Val Asn Phe Leu Ser Lys His Lys Ser Ser Thr Phe
 85 90 95

Ser Gly Cys Val Leu Gln Ser Phe Pro Phe Ala Val Tyr Val Thr Thr
 100 105 110

Lys Asp Ile Leu Leu Ser Met Met Ala Tyr Asp His Tyr Val Ala Ile
 115 120 125

Ala Asn Pro Leu Leu Tyr Thr Val Ile Met Ala Gln Lys Val Cys Ile
 130 135 140

Gln Met Val Leu Ala Ser Tyr Leu Gly Gly Leu Ile Asn Ser Leu Thr
 145 150 155 160

His Thr Ile Gly Leu Leu Lys Leu Asp Phe Cys Gly Pro Asn Ile Val
 165 170 175

Asn His Tyr Phe Cys Asp Val Pro Pro Leu Leu Arg Leu Ser Cys Ser
 180 185 190

Asp Ala His Ile Asn Glu Met Leu Pro Leu Val Phe Ser Gly Leu Ile
 195 200 205

Ala Met Phe Thr Phe Ile Val Ile Met Val Ser Tyr Ile Cys Ile Ile
 210 215 220

Ile Ala Ile Gln Arg Ile His Ala Ala Glu Gly Arg Tyr Lys Ala Phe
 225 230 235 240

Ser Thr Cys Val Ser His Leu Thr Thr Val Thr Leu Phe Tyr Gly Ser
 245 250 255

Val Ser Phe Ser Tyr Ile Gln Pro Ser Ser Gln Tyr Ser Leu Glu Gln
 260 265 270

Glu Lys Val Leu Ala Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn
 275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Ala Lys
 290 295 300

Arg Leu Ile Trp Trp Gly Glu Lys Pro His Leu Thr Gln Ser Cys Ile
 305 310 315 320

<210> 165
 <211> 904
 <212> DNA
 <213> Homo sapiens

<400> 165
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 cacttgcccc tcaactgacat ctcccttttca tctgtcactg tccctaagat gctgatgaac 180
 atgcagactc agcacctagc cgtctttttac aagggatgca ttccacagac atattttttc 240
 atatttttttg ctgacttaga cagtttccctt atcacttcaa tggcatatga caggatgtg 300
 gccatctgtc atcctctaca ttatgccacc atcatgactc agagccagtg tgtcatgctg 360
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 cagcttttct tctgtgctga ccacatcatc cctcactact tctgtgacct tgggtgccctg 480
 ctcaagttgt cctgctcaga caccctccctc aatcagttag caatctttac agcagcattg 540
 acagccatta tgcttccatt cctgtgcatc ctgggtttctt atggtcacat tggggtcacc 600
 atcctccaga ttccctctac caagggcata tgcaaagcct tgtccacttg tggatcccac 660
 ctctcagtgg tgactatcta ttatcggaca attattggtc tctattttct tccccatcc 720
 agcaacacca atgacaagaa cataattgct tcagtgatat acacagcagt cactcccatg 780
 ttgaacccat tcatttacag tctgagaaat aaagacatta agggagccct aagaaaactc 840
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 agac 904

<210> 166
 <211> 289
 <212> PRT
 <213> Homo sapiens

<400> 166
 Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Met Leu Leu Ile
 1 5 10 15

Gln Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser His

20	25	30
Leu Ala Leu Thr Asp Ile Ser Phe Ser Ser Val Thr Val Pro Lys Met		
35	40	45
Leu Met Asn Met Gln Thr Gln His Leu Ala Val Phe Tyr Lys Gly Cys		
50	55	60
Ile Ser Gln Thr Tyr Phe Phe Ile Phe Phe Ala Asp Leu Asp Ser Phe		
65	70	75 80
Leu Ile Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro		
	85	90 95
Leu His Tyr Ala Thr Ile Met Thr Gln Ser Gln Cys Val Met Leu Val		
	100	105 110
Ala Gly Ser Trp Val Ile Ala Cys Ala Cys Ala Leu Leu His Thr Leu		
	115	120 125
Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp His Ile Ile Pro His Tyr		
	130	135 140
Phe Cys Asp Leu Gly Ala Leu Leu Lys Leu Ser Cys Ser Asp Thr Ser		
145	150	155 160
Leu Asn Gln Leu Ala Ile Phe Thr Ala Ala Leu Thr Ala Ile Met Leu		
	165	170 175
Pro Phe Leu Cys Ile Leu Val Ser Tyr Gly His Ile Gly Val Thr Ile		
	180	185 190
Leu Gln Ile Pro Ser Thr Lys Gly Ile Cys Lys Ala Leu Ser Thr Cys		
	195	200 205
Gly Ser His Leu Ser Val Val Thr Ile Tyr Tyr Arg Thr Ile Ile Gly		
	210	215 220
Leu Tyr Phe Leu Pro Pro Ser Ser Asn Thr Asn Asp Lys Asn Ile Ile		
225	230	235 240
Ala Ser Val Ile Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe Ile		
	245	250 255
Tyr Ser Leu Arg Asn Lys Asp Ile Lys Gly Ala Leu Arg Lys Leu Leu		
	260	265 270
Ser Arg Ser Gly Ala Val Ala His Ala Cys Asn Leu Ser Thr Leu Gly		

275

280

285

Gly

<210> 167

<211> 991

<212> DNA

<213> Homo sapiens

<400> 167

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gaaactgtcc tctcatagt tgtcttgagt ttttacatgg tatcgatctt gggcaatggc 180
atcatcattc tggctctcca tacagatgtg cacctccaca cacctatgta cttctttctt 240
gccaacctcc cttcctgga catgagcttc accacgagca ttgtcccaca gctcctggct 300
aacctctggg gaccacagaa aaccataagc tatggagggt gtgtgggtcca gttctatata 360
tccattggc tgggggcaac cgagtgtgtc ctgctggcca ccatgtccta tgaccgctac 420
gctgccatct gcaggccact ccattacact gtcattatgc atccacagct ttgccttggg 480
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atgtccttac cgctgtgtgg gaacaattgc atcgaccact tcttttgca gatgccctc 600
attatgcaac tggcttgtgt ggataccagc ctcaatgaga tggagatgta cctggccagc 660
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gccgtgttga agatcaggct agcagaagg cgagaaaagg cattcaacac ctgttcttcc 780
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aagagcacct cccatgagca gggcaagtgc atagctctgt tctacaccgt agtcactcct 900
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atggtattag agaactgctg tggctctgca g 991

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<210> 168

<211> 314

<212> PRT

<213> Homo sapiens

<400> 168

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Met Met Glu Ile Ala Asn Val Ser Ser Pro Glu Val Phe Val Leu Leu
  1             5             10             15

Gly Phe Ser Thr Arg Pro Ser Leu Glu Thr Val Leu Phe Ile Val Val
      20             25             30

Leu Ser Phe Tyr Met Val Ser Ile Leu Gly Asn Gly Ile Ile Ile Leu
      35             40             45

Val Ser His Thr Asp Val His Leu His Thr Pro Met Tyr Phe Phe Leu
      50             55             60

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Ala Asn Leu Pro Phe Leu Asp Met Ser Phe Thr Thr Ser Ile Val Pro
 65 70 75 80
 Gln Leu Leu Ala Asn Leu Trp Gly Pro Gln Lys Thr Ile Ser Tyr Gly
 85 90 95
 Gly Cys Val Val Gln Phe Tyr Ile Ser His Trp Leu Gly Ala Thr Glu
 100 105 110
 Cys Val Leu Leu Ala Thr Met Ser Tyr Asp Arg Tyr Ala Ala Ile Cys
 115 120 125
 Arg Pro Leu His Tyr Thr Val Ile Met His Pro Gln Leu Cys Leu Gly
 130 135 140
 Leu Ala Leu Ala Ser Trp Leu Gly Gly Leu Thr Thr Ser Met Val Gly
 145 150 155 160
 Ser Thr Leu Thr Met Leu Leu Pro Leu Cys Gly Asn Asn Cys Ile Asp
 165 170 175
 His Phe Phe Cys Glu Met Pro Leu Ile Met Gln Leu Ala Cys Val Asp
 180 185 190
 Thr Ser Leu Asn Glu Met Glu Met Tyr Leu Ala Ser Phe Val Phe Val
 195 200 205
 Val Leu Pro Leu Gly Leu Ile Leu Val Ser Tyr Gly His Ile Ala Arg
 210 215 220
 Ala Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Arg Lys Ala Phe Asn
 225 230 235 240
 Thr Cys Ser Ser His Val Ala Val Val Ser Leu Phe Tyr Gly Ser Ile
 245 250 255
 Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Thr Ser His Glu Gln Gly
 260 265 270
 Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ala Leu Asn Pro
 275 280 285
 Leu Ile Tyr Thr Leu Arg Asn Thr Glu Val Lys Ser Ala Leu Arg His
 290 295 300
 Met Val Leu Glu Asn Cys Cys Gly Ser Ala
 305 310

<210> 169
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 169
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 actcagcatc cttggaaatc tgactatcct catcctcacc ttgctggact cccacettca 180
 gactcccatg tatttctttc tccggaactt ctccttcttg gaaatttcct tcacaaacat 240
 cttcattcca agggtcctga ttagcatcac aacagggaac aagagtatca gctttgctgg 300
 ctgcttcact cagtatttct ttgccatgtt ccttggggct acagagtttt accttctggc 360
 tgccatgtcc tatgaccgct atgtggccat ctgcaaacct ctgcattaca ccaccatcat 420
 gagcagcaga atctgcatcc agctgatttt ctgctcttgg ctgggtgggc taatggctat 480
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 ttacttctgt gactatgagc ctcttctgga actctcatgt tcagacacaa gcctcataga 600
 gaaggttgtc tttcttgtgg catctgtgac cctgggtgtc actctggtgc tagtgattct 660
 ctcctatgca ttcattatca agactattct gaagctcccc tctgccaac aaaggacaaa 720
 agccttttcc acatgttctt cccacatgat tgtcatctcc ctctcttacg gaagctgcat 780
 gtttatgtac attaatccct ctgcaaaaga aggggataca ttcaacaagg gagtagctct 840
 actcattact tcagttgctc ctttgttgaa cccctttatt tacaccctaa ggaaccaaca 900
 ggtaaaacaa cccttcaagg atatggtcaa aaagcttctg aatctttaaa g 951

<210> 170
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 170
 Met Lys Asn Lys Thr Val Leu Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Asp Val Pro Glu Leu Gln Val Ala Val Phe Thr Phe Leu Phe Leu Ala
 20 25 30
 Tyr Leu Leu Ser Ile Leu Gly Asn Leu Thr Ile Leu Ile Leu Thr Leu
 35 40 45
 Leu Asp Ser His Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg Asn Phe
 50 55 60
 Ser Phe Leu Glu Ile Ser Phe Thr Asn Ile Phe Ile Pro Arg Val Leu
 65 70 75 80
 Ile Ser Ile Thr Thr Gly Asn Lys Ser Ile Ser Phe Ala Gly Cys Phe

	85	90	95
Thr Gln Tyr Phe Phe Ala Met Phe Leu Gly Ala Thr Glu Phe Tyr Leu			
	100	105	110
Leu Ala Ala Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu			
	115	120	125
His Tyr Thr Thr Ile Met Ser Ser Arg Ile Cys Ile Gln Leu Ile Phe			
	130	135	140
Cys Ser Trp Leu Gly Gly Leu Met Ala Ile Ile Pro Thr Ile Thr Leu			
	145	150	155
Met Ser Gln Gln Asp Phe Cys Ala Ser Asn Arg Leu Asn His Tyr Phe			
	165	170	175
Cys Asp Tyr Glu Pro Leu Leu Glu Leu Ser Cys Ser Asp Thr Ser Leu			
	180	185	190
Ile Glu Lys Val Val Phe Leu Val Ala Ser Val Thr Leu Val Val Thr			
	195	200	205
Leu Val Leu Val Ile Leu Ser Tyr Ala Phe Ile Ile Lys Thr Ile Leu			
	210	215	220
Lys Leu Pro Ser Ala Gln Gln Arg Thr Lys Ala Phe Ser Thr Cys Ser			
	225	230	235
Ser His Met Ile Val Ile Ser Leu Ser Tyr Gly Ser Cys Met Phe Met			
	245	250	255
Tyr Ile Asn Pro Ser Ala Lys Glu Gly Asp Thr Phe Asn Lys Gly Val			
	260	265	270
Ala Leu Leu Ile Thr Ser Val Ala Pro Leu Leu Asn Pro Phe Ile Tyr			
	275	280	285
Thr Leu Arg Asn Gln Gln Val Lys Gln Pro Phe Lys Asp Met Val Lys			
	290	295	300
Lys Leu Leu Asn Leu			
	305		

<210> 171
 <211> 1000
 <212> DNA

<213> Homo sapiens

<400> 171

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gaggtgcaga gggtttgctt tgtgatattt ctgttcttgt acacagcaat tgtgctgggg 180
aatttcctca ttgtgctcac tgatcatgacc agcagaagcc ttgggtcccc catgtacttc 240
ttcctcagct acctctcctt catggagatc tgctactcct ccgctacagc ccccaaactc 300
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cactatgtgg ccatctgcaa gcccctcagc tacaccacca tcatgaactg gcaggtgtgt 480
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<210> 172

<211> 326

<212> PRT

<213> Homo sapiens

<400> 172

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Met Ser Asp Tyr Ser Thr Pro Pro Lys Leu Leu Pro Leu Asp Asp Asp
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Leu Leu Ala Asn Ile His Asn Met Thr Glu Phe Ile Phe Leu Val Leu
      20             25             30

Ser Pro Asn Gln Glu Val Gln Arg Val Cys Phe Val Ile Phe Leu Phe
      35             40             45

Leu Tyr Thr Ala Ile Val Leu Gly Asn Phe Leu Ile Val Leu Thr Val
      50             55             60

Met Thr Ser Arg Ser Leu Gly Ser Pro Met Tyr Phe Phe Leu Ser Tyr
      65             70             75             80

Leu Ser Phe Met Glu Ile Cys Tyr Ser Ser Ala Thr Ala Pro Lys Leu
      85             90             95

Ile Ser Asp Leu Leu Ala Glu Arg Lys Val Ile Ser Trp Trp Gly Cys
      100            105            110
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Met Ala Gln Leu Phe Phe Leu His Phe Phe Gly Gly Thr Glu Ile Phe
 115 120 125

Leu Leu Thr Val Met Ala Tyr Asp His Tyr Val Ala Ile Cys Lys Pro
 130 135 140

Leu Ser Tyr Thr Thr Ile Met Asn Trp Gln Val Cys Thr Val Leu Val
 145 150 155 160

Gly Ile Ala Trp Val Gly Gly Phe Met His Ser Phe Ala Gln Ile Leu
 165 170 175

Leu Ile Phe His Leu Leu Phe Cys Gly Pro Asn Val Ile Asn His Tyr
 180 185 190

Phe Cys Asp Leu Val Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr Phe
 195 200 205

Leu Ile Gly Leu Leu Ile Val Ala Asn Gly Gly Thr Leu Ser Val Ile
 210 215 220

Ser Phe Gly Val Leu Leu Ala Ser Tyr Met Val Ile Leu Leu His Leu
 225 230 235 240

Arg Thr Trp Ser Ser Glu Gly Trp Cys Lys Ala Leu Ser Thr Cys Gly
 245 250 255

Ser His Phe Ala Val Val Ile Leu Phe Phe Gly Pro Cys Val Phe Asn
 260 265 270

Ser Leu Arg Pro Ser Thr Thr Leu Pro Ile Asp Lys Met Val Ala Val
 275 280 285

Phe Tyr Thr Val Ile Thr Ala Ile Leu Asn Pro Val Ile Tyr Ser Leu
 290 295 300

Arg Asn Ala Glu Met Arg Lys Ala Met Lys Arg Leu Trp Ile Arg Thr
 305 310 315 320

Leu Arg Leu Asn Glu Lys
 325

<210> 173

<211> 971

<212> DNA

<213> Homo sapiens

<400> 173

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ctgtctatgt cttcatcatc ataggggaata tgctgattat tgtagcagtg gttagctccc 180
agaggctcca caaaccatg tatattttct tggcgaatct gtccttcctg gatatttctt 240
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tggctgggtg cttgctccag ttctttatct tcggctctct agccacagct gaatgcttac 360
tgctggctgt catggcatat gaccgctacc tggcaatttg ctaccactc cactaccac 420
tcctgatggg gccagacgg tacatggggc tgggtggcac aacctggctc tctggatttg 480
tggtagatgg actggttggt gccctgggtg ccagctgag gttctgtggc cccaaccaca 540
ttgaccagtt ttactgtgac tttatgcttt tcgtgggcct ggcttgctcg gatcccagag 600
tggtcaggt gacaactctc attctgtctg tgttctgcct cactattcct tttggactga 660
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cgctcatgat cttttatggt gcacctctg ctgtccattc ccagctcctc tccaaggtct 840
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acaaggaggt gcatcaggca cttcggaaga ttctctgtat caaacaact gaaacacttg 960
attgaaggag a 971
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<210> 174

<211> 315

<212> PRT

<213> Homo sapiens

<400> 174

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Met Glu Ile Val Ser Thr Gly Asn Glu Thr Ile Thr Glu Phe Val Leu
  1              5              10              15

Leu Gly Phe Tyr Asp Ile Pro Glu Leu His Phe Leu Phe Phe Ile Val
      20              25              30

Phe Thr Ala Val Tyr Val Phe Ile Ile Ile Gly Asn Met Leu Ile Ile
      35              40              45

Val Ala Val Val Ser Ser Gln Arg Leu His Lys Pro Met Tyr Ile Phe
      50              55              60

Leu Ala Asn Leu Ser Phe Leu Asp Ile Leu Tyr Thr Ser Ala Val Met
      65              70              75              80

Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala
      85              90              95

Gly Cys Leu Leu Gln Phe Phe Ile Phe Gly Ser Leu Ala Thr Ala Glu
      100             105             110
```

Cys Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys
115 120 125

Tyr Pro Leu His Tyr Pro Leu Leu Met Gly Pro Arg Arg Tyr Met Gly
130 135 140

Leu Val Val Thr Thr Trp Leu Ser Gly Phe Val Val Asp Gly Leu Val
145 150 155 160

Val Ala Leu Val Ala Gln Leu Arg Phe Cys Gly Pro Asn His Ile Asp
165 170 175

Gln Phe Tyr Cys Asp Phe Met Leu Phe Val Gly Leu Ala Cys Ser Asp
180 185 190

Pro Arg Val Ala Gln Val Thr Thr Leu Ile Leu Ser Val Phe Cys Leu
195 200 205

Thr Ile Pro Phe Gly Leu Ile Leu Thr Ser Tyr Ala Arg Ile Val Val
210 215 220

Ala Val Leu Arg Val Pro Ala Gly Ala Ser Arg Arg Arg Ala Phe Ser
225 230 235 240

Thr Cys Ser Ser His Leu Ala Val Val Thr Thr Phe Tyr Gly Thr Leu
245 250 255

Met Ile Phe Tyr Val Ala Pro Ser Ala Val His Ser Gln Leu Leu Ser
260 265 270

Lys Val Phe Ser Leu Leu Tyr Thr Val Val Thr Pro Leu Phe Asn Pro
275 280 285

Val Ile Tyr Thr Met Arg Asn Lys Glu Val His Gln Ala Leu Arg Lys
290 295 300

Ile Leu Cys Ile Lys Gln Thr Glu Thr Leu Asp
305 310 315

<210> 175

<211> 989

<212> DNA

<213> Homo sapiens

<400> 175

gaacataaat gccttaaattg acaatggctg ctgagaattc ctccttcgtg acacagttta 60
tcctcgcagg cttaactgac caaccgggag tccagatccc cctcttcttc ctgtttctag 120

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gcttctacgt ggtcactgtg gtggggaacc tgggcttgat aacctgata aggtcaact 180
ctcacttgca caccctatg tacttcttcc tctataactt gtccttcata gatttctgct 240
attccagtgt tatcactccc aaaatgctga tgagctttgt cttaaagaag aacagcatct 300
cctacgcagg gtgtatgact cagctcttct tcttctttt ctttggtgtc tctgagtcct 360
tcatcctgtc agcaatggcg tatgaccgct atgtggccat ctgtaacca ctggtgtaca 420
tggtcacccat gtctccccag gtgtgttttc tccttttggt ggggtgtctat gggatgggg 480
ttgctggggc catggccac acagcgtgca tgatgggtgt gaccttctgt gccaataacc 540
ttgtcaacca ctacatgtgt gacatccttc cccttcttga gtgtgcttgc accagcacct 600
atgtgaatga gcttgtagtg tttgttggtg tgggcattga tattggtgtg cccacagtca 660
ccatcttcat ttcctatgct ctcatctctt ccagcatctt ccacattgat tccacggagg 720
gcaggccaa agccttcagc acctgcagct cccacataat tgcagtttct ctgttctttg 780
ggtcaggagc attcatgtac ctcaaaccct tttctctttt agctatgaac cagggaagg 840
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ggaataagga cgtcaaagtt gctctaaaga aaatcttgaa caaaaatgca ttctcctgag 960
aaaagggcaa tgctcaggaa agaaacact 989

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<210> 176
<211> 313
<212> PRT
<213> Homo sapiens

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<400> 176
Met Thr Met Ala Ala Glu Asn Ser Ser Phe Val Thr Gln Phe Ile Leu
  1              5              10              15

Ala Gly Leu Thr Asp Gln Pro Gly Val Gln Ile Pro Leu Phe Phe Leu
      20              25              30

Phe Leu Gly Phe Tyr Val Val Thr Val Val Gly Asn Leu Gly Leu Ile
      35              40              45

Thr Leu Ile Arg Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe
      50              55              60

Leu Tyr Asn Leu Ser Phe Ile Asp Phe Cys Tyr Ser Ser Val Ile Thr
      65              70              75              80

Pro Lys Met Leu Met Ser Phe Val Leu Lys Lys Asn Ser Ile Ser Tyr
      85              90              95

Ala Gly Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Val Ser
      100             105             110

Glu Ser Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile
      115             120             125

Cys Asn Pro Leu Leu Tyr Met Val Thr Met Ser Pro Gln Val Cys Phe

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130	135	140
Leu Leu Leu Leu Gly Val Tyr Gly Met Gly Phe Ala Gly Ala Met Ala		
145	150	155 160
His Thr Ala Cys Met Met Gly Val Thr Phe Cys Ala Asn Asn Leu Val		
	165	170 175
Asn His Tyr Met Cys Asp Ile Leu Pro Leu Leu Glu Cys Ala Cys Thr		
	180	185 190
Ser Thr Tyr Val Asn Glu Leu Val Val Phe Val Val Val Gly Ile Asp		
	195	200 205
Ile Gly Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Ala Leu Ile Leu		
	210	215 220
Ser Ser Ile Phe His Ile Asp Ser Thr Glu Gly Arg Ser Lys Ala Phe		
225	230	235 240
Ser Thr Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser		
	245	250 255
Gly Ala Phe Met Tyr Leu Lys Pro Phe Ser Leu Leu Ala Met Asn Gln		
	260	265 270
Gly Lys Val Ser Ser Leu Phe Tyr Thr Thr Val Val Pro Met Leu Asn		
	275	280 285
Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Lys		
	290	295 300
Lys Ile Leu Asn Lys Asn Ala Phe Ser		
305	310	

<210> 177

<211> 950

<212> DNA

<213> Homo sapiens

<400> 177

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acatggagac aaagaattat agcagcagca cctcaggcct catcctcctg ggcctctctt 60
ccaaccctaa gctgcagaaa cctctctttg ccatcttcct catcatgtac ctactcactg 120
cgggtggggaa tgtgctcatc atcctggcca tctactctga ccccaggctc cacaccctta 180
tgtacttttt tctcagcaac ttgtctttca tggatatctg cttcacaaca gtcatagtgc 240
ctaagatgct ggtgaatttt ctatcagaga caaagattat ctcttatgtg ggctgcctga 300
tccagatgta cttcttcctg gcatttgga acactgacag ctacctgctg gcctctatgg 360

```

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ccatcgaccg gctgggtggcc atctgcaacc ccttacacta tgatgtgggtt atgaaaccat 420
ggcattgcct actcatgcta ttgggttctt gcagcatctc ccacctacat tccctgttcc 480
gcgtgctact tatgtctcgc ttgtctttct gtgcctctca catcattaag cactttttct 540
gtgacaccca gcctgtgcta aagctctcct gctctgacac atcctccagc cagatgggtg 600
tgatgactga gaccttagct gtcattgtga ccccttctt gtgtaccatc ttctcctacc 660
tgcaaatacat cgtcactgtg ctcaaatcc cctctgcagc cgggaagtgg aaggccttct 720
ctacctgtgg ctccacctc actgtagtgg tcctgttcta tgggagtgtc atctatgtct 780
attttaggcc tctgtccatg tactcagtga tgaagggccg ggtagccaca gttatgtaca 840
cagtagtgac acccatgctg aaccctttca tctacagcct gaggaacaaa gatatgaaaa 900
ggggtttgaa gaaattaaga cacagaattt actcatagaa agaacaaaat 950

```

<210> 178

<211> 311

<212> PRT

<213> Homo sapiens

<400> 178

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Met Glu Thr Lys Asn Tyr Ser Ser Ser Thr Ser Gly Phe Ile Leu Leu
  1              5              10              15

Gly Leu Ser Ser Asn Pro Lys Leu Gln Lys Pro Leu Phe Ala Ile Phe
          20              25              30

Leu Ile Met Tyr Leu Leu Thr Ala Val Gly Asn Val Leu Ile Ile Leu
      35              40              45

Ala Ile Tyr Ser Asp Pro Arg Leu His Thr Pro Met Tyr Phe Phe Leu
      50              55              60

Ser Asn Leu Ser Phe Met Asp Ile Cys Phe Thr Thr Val Ile Val Pro
      65              70              75              80

Lys Met Leu Val Asn Phe Leu Ser Glu Thr Lys Ile Ile Ser Tyr Val
          85              90              95

Gly Cys Leu Ile Gln Met Tyr Phe Phe Met Ala Phe Gly Asn Thr Asp
      100              105              110

Ser Tyr Leu Leu Ala Ser Met Ala Ile Asp Arg Leu Val Ala Ile Cys
      115              120              125

Asn Pro Leu His Tyr Asp Val Val Met Lys Pro Trp His Cys Leu Leu
      130              135              140

Met Leu Leu Gly Ser Cys Ser Ile Ser His Leu His Ser Leu Phe Arg
      145              150              155              160

```

Val Leu Leu Met Ser Arg Leu Ser Phe Cys Ala Ser His Ile Ile Lys
 165 170 175
 His Phe Phe Cys Asp Thr Gln Pro Val Leu Lys Leu Ser Cys Ser Asp
 180 185 190
 Thr Ser Ser Ser Gln Met Val Val Met Thr Glu Thr Leu Ala Val Ile
 195 200 205
 Val Thr Pro Phe Leu Cys Thr Ile Phe Ser Tyr Leu Gln Ile Ile Val
 210 215 220
 Thr Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Trp Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Gly Ser His Leu Thr Val Val Val Leu Phe Tyr Gly Ser Val
 245 250 255
 Ile Tyr Val Tyr Phe Arg Pro Leu Ser Met Tyr Ser Val Met Lys Gly
 260 265 270
 Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285
 Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg Gly Leu Lys Lys
 290 295 300
 Leu Arg His Arg Ile Tyr Ser
 305 310

<210> 179

<211> 1016

<212> DNA

<213> Homo sapiens

<400> 179

ggtcaaactg ccctttacat ctctcccact gcttctccaa accctatcca ggaagtccag 60
 agacatggag ataaagaact acagcagcag cacctcaggc ttcacacctc tgggcctctc 120
 ttccaaccct cagctgcaga aacctctctt tgccatcttc ctcatcatgt acctgctcgc 180
 tgcggtgggg aatgtgctca tcatccggc catctactct gacccaggc tccacacccc 240
 tatgtacttt tttctcagca acttgctctt catggatata tgcttcacaa cagtcatagt 300
 gcctaagatg ctggtgaatt ttctatcaga gacaaagggt atctcctatg tgggctgcct 360
 ggcccagatg tacttcttta tggcatttgg gaacactgac agctacctgc tggcctctat 420
 ggccatcgac cggctggtgg ccatctgcaa ccccttacac tatgatgtgg ttatgaaacc 480
 acggcattgc ctgctcatgc tattgggttc ttgcagcatc tccacacctac attccctgtt 540
 ccgctgtgta cttatgtctc gcttgtcttt ctgtgcctct cacatcatta agcacttttt 600
 ctgtgacacc cagcctgtgc taaagctctc ctgctctgac acatcctcca gccagatggg 660

ggtgatgact gagaccttag ctgtcattgt gaccccttc ctgtgtatca ttttctccta 720
 cctgcgaatc atggtcactg tgctcagaat cccctctgca gccgggaagt ggaaggcctt 780
 ctctacctgt ggctcccacc tcaactgcagt agcccttttc tatgggagta ttatttatgt 840
 ctatttttagg cccctgtcca tgtactcagt ggtagggac cgggtagcca cagttatgta 900
 cacagtagtg acacccatgc tgaacccttt catctacagc ctgaggaaca aagatatgaa 960
 gaggggtttg aagaaattac aggacagaat ttaccggtaa aaggaacaaa atgttg 1016

<210> 180

<211> 311

<212> PRT

<213> Homo sapiens

<400> 180

Met Glu Thr Lys Asn Tyr Ser Ser Ser Thr Ser Gly Phe Ile Leu Leu
 1 5 10 15

Gly Leu Ser Ser Asn Pro Lys Leu Gln Lys Pro Leu Phe Ala Ile Phe
 20 25 30

Leu Ile Met Tyr Leu Leu Thr Ala Val Gly Asn Val Leu Ile Ile Leu
 35 40 45

Ala Ile Tyr Ser Asp Pro Arg Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Ser Asn Leu Ser Phe Met Asp Ile Cys Phe Thr Thr Val Ile Val Pro
 65 70 75 80

Lys Met Leu Val Asn Phe Leu Ser Glu Thr Lys Ile Ile Ser Tyr Val
 85 90 95

Gly Cys Leu Ile Gln Met Tyr Phe Phe Met Ala Phe Gly Asn Thr Asp
 100 105 110

Ser Tyr Leu Leu Ala Ser Met Ala Ile Asp Arg Leu Val Ala Ile Cys
 115 120 125

Asn Pro Leu His Tyr Asp Val Val Met Lys Pro Trp His Cys Leu Leu
 130 135 140

Met Leu Leu Gly Ser Cys Ser Ile Ser His Leu His Ser Leu Phe Arg
 145 150 155 160

Val Leu Leu Met Ser Arg Leu Ser Phe Cys Ala Ser His Ile Ile Lys
 165 170 175

His Phe Phe Cys Asp Thr Gln Pro Val Leu Lys Leu Ser Cys Ser Asp

180	185	190
Thr Ser Ser Ser Gln Met Val Val Met Thr Glu Thr Leu Ala Val Ile		
195	200	205
Val Thr Pro Phe Leu Cys Thr Ile Phe Ser Tyr Leu Gln Ile Ile Val		
210	215	220
Thr Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Trp Lys Ala Phe Ser		
225	230	235 240
Thr Cys Gly Ser His Leu Thr Val Val Val Leu Phe Tyr Gly Ser Val		
	245	250 255
Ile Tyr Val Tyr Phe Arg Pro Leu Ser Met Tyr Ser Val Met Lys Gly		
	260	265 270
Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro		
	275	280 285
Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg Gly Leu Lys Lys		
	290	295 300
Leu Arg His Arg Ile Tyr Ser		
305	310	

<210> 181

<211> 960

<212> DNA

<213> Homo sapiens

<400> 181

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tctgactccc acctccacac ccccatgtac ttcttctct ccaacctgtg ctgggctgac 60
atcagtttca cctcggccac ggttcccaag atgacgggtg acatgcagtc gcatagcaga 120
gtcatctctt atgcgggctg cctgacacgg atgtctttct tcgtcctttt tgcattgata 180
gaagacatgc tcctgactgt gatggcccag gactgctttg tagccatctg tcgccctctg 240
cactacgcag tcatcgtgaa tcctcacctc tgtgtcttct tagtttttgt gtcccttttc 300
cttagcctgt tggattccca gctgcacagt aagatttgtt tacaattcac cttcttcaag 360
aatgtggaat tctctcattt tgtctgtgag ccattctaat ttctcaacct tgcgtgttct 420
gacagcttca tcaatagcat attcatgtat ttcatagta ctatgttttg ttttcttccc 480
atttcaggga tccttttctc ttactataaa attgtcccct ccattctaag gatttcacg 540
tcagatggga agtataaagc cttctccacc tgtggctctc acctggcagt tgtttgctta 600
ttttatggaa caggcattgg cgtgtacctg acttcagctg tggcaccacc cccagcaat 660
gggtgtgggt catcagttaa gtacaccgtg gtcaccccca tgcgaaccc tttcatctac 720
agcctgagaa acagggacat tcaaagcacc ctgtggaggc tgtgcagcag aacagttaaa 780
tctcttgatc tgttccattc tttttcttgt gtgggtaaga aagggaacc acaaaaaatc 840
cctacatctg caaatcctgc ccttagtcac attatttctg tggctggatg gttttattcc 900

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tttccgcatt tcctatgtga atattgtttt cttcgttatg cctttaactg gaatgggtga 960

<210> 182

<211> 311

<212> PRT

<213> Homo sapiens

<400> 182

Met	Tyr	Phe	Phe	Leu	Ser	Asn	Leu	Cys	Trp	Ala	Asp	Ile	Ser	Phe	Thr	1	5	10	15
Ser	Ala	Thr	Val	Pro	Lys	Met	Thr	Val	Asp	Met	Gln	Ser	His	Ser	Arg	20	25	30	
Val	Ile	Ser	Tyr	Ala	Gly	Cys	Leu	Thr	Arg	Met	Ser	Phe	Phe	Val	Leu	35	40	45	
Phe	Ala	Cys	Ile	Glu	Asp	Met	Leu	Leu	Thr	Val	Met	Ala	Gln	Asp	Cys	50	55	60	
Phe	Val	Ala	Ile	Cys	Arg	Pro	Leu	His	Tyr	Ala	Val	Ile	Val	Asn	Pro	65	70	75	80
His	Leu	Cys	Val	Phe	Leu	Val	Leu	Val	Ser	Phe	Phe	Leu	Ser	Leu	Leu	85	90	95	
Asp	Ser	Gln	Leu	His	Ser	Lys	Ile	Val	Leu	Gln	Phe	Thr	Phe	Phe	Lys	100	105	110	
Asn	Val	Glu	Ile	Ser	His	Phe	Val	Cys	Glu	Pro	Ser	Gln	Phe	Leu	Asn	115	120	125	
Leu	Ala	Cys	Ser	Asp	Ser	Phe	Ile	Asn	Ser	Ile	Phe	Met	Tyr	Phe	Asp	130	135	140	
Ser	Thr	Met	Phe	Gly	Phe	Leu	Pro	Ile	Ser	Gly	Ile	Leu	Leu	Ser	Tyr	145	150	155	160
Tyr	Lys	Ile	Val	Pro	Ser	Ile	Leu	Arg	Ile	Ser	Ser	Ser	Asp	Gly	Lys	165	170	175	
Tyr	Lys	Ala	Phe	Ser	Thr	Cys	Gly	Ser	His	Leu	Ala	Val	Val	Cys	Leu	180	185	190	
Phe	Tyr	Gly	Thr	Gly	Ile	Gly	Val	Tyr	Leu	Thr	Ser	Ala	Val	Ala	Pro	195	200	205	

Pro Pro Ser Asn Gly Val Val Ala Ser Val Lys Tyr Thr Val Val Thr
 210 215 220
 Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Arg Asp Ile Gln
 225 230 235 240
 Ser Thr Leu Trp Arg Leu Cys Ser Arg Thr Val Lys Ser Leu Asp Leu
 245 250 255
 Phe His Ser Phe Ser Cys Val Gly Lys Lys Gly Gln Pro Gln Lys Ile
 260 265 270
 Pro Thr Ser Ala Asn Pro Ala Leu Ser His Ile Ile Ser Val Ala Gly
 275 280 285
 Trp Phe Tyr Ser Phe Pro His Phe Leu Cys Glu Tyr Cys Phe Leu Arg
 290 295 300
 Tyr Ala Phe Asn Trp Asn Gly
 305 310

<210> 183
 <211> 890
 <212> DNA
 <213> Homo sapiens

<400> 183
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 taatgtactt cttccttgcc tacttggtcac ttatggatgc catatattcc actgccatgt 120
 cacccaaatt gatgatagac ttactctgtg ataaaatcgc tatttccttg tcagcttgca 180
 tgggtcagct cttcatagaa cacttacttg gtggtgcaga ggtcttcctt ttggtggtga 240
 tggcctatga tcgctatgtg gctatctcta agccgctgca ctatttgaac atcatgaatc 300
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 ttcaaattgt ctttctgtac agtctaccaa tctgtggccc caatgttatt gaccactctg 420
 tctgtgacat gtacccattg ttggaactgt tgtgccttga cacctacttt ataggactca 480
 ctgtggttgc caatggtgga ataatttcta tgggtcatctt tacctttctg ctaatctcct 540
 gtggagtcat cctaaacttc cttaaaactt acagtcagga agagaggcat aaagccctgc 600
 ctacctgcat cttccacatc attgtggttg ccctcgtttt tgttccctgt atttttatgt 660
 atggttagacc cgtttccaac tttccctttg ataaattaat gactgtgttt tattcaatta 720
 tcacactcat gttgaatcct ttaatatact cgttgagaca atcagagatg aaaaatgcta 780
 tgaaaaatct ctggtgtgaa aagttaagta tagttagaaa aagagtatct cccacactga 840
 acatatttat tcctagttct aaggcaacaa ataggcggtg aaatactgca 890

<210> 184
 <211> 292
 <212> PRT

<213> Homo sapiens

<400> 184

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Met Val Gly Asn Leu Leu Ile Trp Val Thr Thr Ile Gly Ser Pro Ser
  1              5              10              15

Leu Gly Ser Leu Met Tyr Phe Phe Leu Ala Tyr Leu Ser Leu Met Asp
      20              25              30

Ala Ile Tyr Ser Thr Ala Met Ser Pro Lys Leu Met Ile Asp Leu Leu
      35              40              45

Cys Asp Lys Ile Ala Ile Ser Leu Ser Ala Cys Met Gly Gln Leu Phe
      50              55              60

Ile Glu His Leu Leu Gly Gly Ala Glu Val Phe Leu Leu Val Val Met
      65              70              75              80

Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro Leu His Tyr Leu Asn
      85              90              95

Ile Met Asn Arg Leu Val Cys Ile Leu Leu Leu Val Val Ala Met Ile
      100             105             110

Gly Gly Phe Val His Ser Val Val Gln Ile Val Phe Leu Tyr Ser Leu
      115             120             125

Pro Ile Cys Gly Pro Asn Val Ile Asp His Ser Val Cys Asp Met Tyr
      130             135             140

Pro Leu Leu Glu Leu Leu Cys Leu Asp Thr Tyr Phe Ile Gly Leu Thr
      145             150             155             160

Val Val Ala Asn Gly Gly Ile Ile Cys Met Val Ile Phe Thr Phe Leu
      165             170             175

Leu Ile Ser Cys Gly Val Ile Leu Asn Phe Leu Lys Thr Tyr Ser Gln
      180             185             190

Glu Glu Arg His Lys Ala Leu Pro Thr Cys Ile Ser His Ile Ile Val
      195             200             205

Val Ala Leu Val Phe Val Pro Cys Ile Phe Met Tyr Val Arg Pro Val
      210             215             220

Ser Asn Phe Pro Phe Asp Lys Leu Met Thr Val Phe Tyr Ser Ile Ile
      225             230             235             240
```

Thr Leu Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Gln Ser Glu Met
245 250 255

Lys Asn Ala Met Lys Asn Leu Trp Cys Glu Lys Leu Ser Ile Val Arg
260 265 270

Lys Arg Val Ser Pro Thr Leu Asn Ile Phe Ile Pro Ser Ser Lys Ala
275 280 285

Thr Asn Arg Arg
290

<210> 185

<211> 1067

<212> DNA

<213> Homo sapiens

<400> 185

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gcccatgggt aactggactg cagcgggtgac tgagtttggt ctgctgggggt tttccctgag 60
cggggaggtg gagctgctgc tcctgggtgct cctgctgccc acgttcctgc tgactcttct 120
ggggaacctg ctcatcatct ccaactgtgct gtccctgctcc cgctccaca ccccatgta 180
cttcttcttg tgcaacctct ctatcctgga catcctcttc acctcagtca tctctccaaa 240
agtgttggcc aacttaggat ctagggataa aaccatctcc ttgccggat gtatcaccca 300
gtgctatttc tactttttct tgggcacagt tgagttcctc ctgctgacgg tcatgtccta 360
tgaccgttat gccaccatct gctgccccct gcggtacacc accatcatga gaccttctgt 420
ctgcattggg accgttgtat tctcttggtt gggaggcttc ctgtctgtgc tctttccaac 480
catcctcatc tcccagctgc ccttctgttg ctccaatata attaaccact tcttctgtga 540
cagtggaccc ttgctggccc tggcctgtgc agacaccact gccatcgagc tgatggattt 600
tatgctttct tccatggtca tcctctgctg catagtcctc gtggcctatt cctatacgta 660
catcatcttg accatagtgc gcattccttc tgcaagtgga aggaagaagg cctttaatac 720
ctgtgcttcc cacctgacca tagtcatcat ttctagtggc atcactgtgt ttatctatgt 780
gactccctcc cagaaagaat atctggagat caacaagatc cctttgggtc tgagcagtgt 840
ggtgactcca ttctcaacc cctttatata tactctgagg aatgacacag tgcagggagt 900
cctcagggat gtgtgggtca gggttcgagg agtttttgaa aagaggatga gggcagtgtc 960
gagaagcaga ttatcctcca acaaagacca ccaaggaagg gcttgctctt ctccaccatg 1020
tgtctattct gtaaagctcc agtgtttagaa agagaggagc tgcctta 1067

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<210> 186

<211> 347

<212> PRT

<213> Homo sapiens

<400> 186

Met Gly Asn Trp Thr Ala Ala Val Thr Glu Phe Val Leu Leu Gly Phe
1 5 10 15

Ser Leu Ser Gly Glu Val Glu Leu Leu Leu Val Leu Leu Leu Pro
 20 25 30
 Thr Phe Leu Leu Thr Leu Leu Gly Asn Leu Leu Ile Ile Ser Thr Val
 35 40 45
 Leu Ser Cys Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Asn
 50 55 60
 Leu Ser Ile Leu Asp Ile Leu Phe Thr Ser Val Ile Ser Pro Lys Val
 65 70 75 80
 Leu Ala Asn Leu Gly Ser Arg Asp Lys Thr Ile Ser Phe Ala Gly Cys
 85 90 95
 Ile Thr Gln Cys Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Leu
 100 105 110
 Leu Leu Thr Val Met Ser Tyr Asp Arg Tyr Ala Thr Ile Cys Cys Pro
 115 120 125
 Leu Arg Tyr Thr Thr Ile Met Arg Pro Ser Val Cys Ile Gly Thr Val
 130 135 140
 Val Phe Ser Trp Val Gly Gly Phe Leu Ser Val Leu Phe Pro Thr Ile
 145 150 155 160
 Leu Ile Ser Gln Leu Pro Phe Cys Gly Ser Asn Ile Ile Asn His Phe
 165 170 175
 Phe Cys Asp Ser Gly Pro Leu Leu Ala Leu Ala Cys Ala Asp Thr Thr
 180 185 190
 Ala Ile Glu Leu Met Asp Phe Met Leu Ser Ser Met Val Ile Leu Cys
 195 200 205
 Cys Ile Val Leu Val Ala Tyr Ser Tyr Thr Tyr Ile Ile Leu Thr Ile
 210 215 220
 Val Arg Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Asn Thr Cys
 225 230 235 240
 Ala Ser His Leu Thr Ile Val Ile Ile Ser Ser Gly Ile Thr Val Phe
 245 250 255
 Ile Tyr Val Thr Pro Ser Gln Lys Glu Tyr Leu Glu Ile Asn Lys Ile
 260 265 270

Pro Leu Val Leu Ser Ser Val Val Thr Pro Phe Leu Asn Pro Phe Ile
275 280 285

Tyr Thr Leu Arg Asn Asp Thr Val Gln Gly Val Leu Arg Asp Val Trp
290 295 300

Val Arg Val Arg Gly Val Phe Glu Lys Arg Met Arg Ala Val Leu Arg
305 310 315 320

Ser Arg Leu Ser Ser Asn Lys Asp His Gln Gly Arg Ala Cys Ser Ser
325 330 335

Pro Pro Cys Val Tyr Ser Val Lys Leu Gln Cys
340 345

<210> 187
<211> 846
<212> DNA
<213> Homo sapiens

<400> 187
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tattccactg ccatgtcacc caaattgatg atagacttac tctgtgataa aatcgctatt 120
tccttgtcag cttgcatggg tcagctcttc atagaacact tacttggtgg tgcagaggtc 180
ttccttttgg tggatgatggc ctatgatcgc tatgtggcta tctctaagcc gctgcactat 240
ttgaacatca tgaatcgact ggtttgcata cttctgttgg tggatggccat gattggagggt 300
tttgtgcact ctgtggttca aattgtcttt ctgtacagtc taccaatctg tggccccaat 360
gttattgacc actctgtctg tgacatgtac ccattgttgg aactgttgtg cattgacacc 420
tactttatag gactcactgt ggttgccaat ggtggaataa tttgtatggt catctttacc 480
tttctgctaa tctcctgtgg agtcaccta aacttcctta aaacttacag tcaggaagag 540
aggcataaag ccctgcctac ctgcatctcc cacatcattg tggttgccct cgtttttgtt 600
ccctgtattt ttatgtatgt tagaccggtt tccaactttc cctttgataa attaatgact 660
gtgttttatt caattatcac actcatgttg aatcctttta tatactcgtt gagacaatca 720
gagatgaaaa atgctatgaa aaatctctgg tgtgaaatgt taagtatagt tagaaaaaga 780
gtatctccca cactgaacat atttattcct agttctaagg caacaaatag gcggtaaaat 840
actgca 846

<210> 188
<211> 278
<212> PRT
<213> Homo sapiens

<400> 188
Pro Ser Leu Gly Ser Leu Met Tyr Phe Phe Leu Ala Tyr Leu Ser Leu
1 5 10 15

Met Asp Ala Ile Tyr Ser Thr Ala Met Ser Pro Lys Leu Met Ile Asp
 20 25 30
 Leu Leu Cys Asp Lys Ile Ala Ile Ser Leu Ser Ala Cys Met Gly Gln
 35 40 45
 Leu Phe Ile Glu His Leu Leu Gly Gly Ala Glu Val Phe Leu Leu Val
 50 55 60
 Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro Leu His Tyr
 65 70 75 80
 Leu Asn Ile Met Asn Arg Leu Val Cys Ile Leu Leu Leu Val Val Ala
 85 90 95
 Met Ile Gly Gly Phe Val His Ser Val Val Gln Ile Val Phe Leu Tyr
 100 105 110
 Ser Leu Pro Ile Cys Gly Pro Asn Val Ile Asp His Ser Val Cys Asp
 115 120 125
 Met Tyr Pro Leu Leu Glu Leu Leu Cys Ile Asp Thr Tyr Phe Ile Gly
 130 135 140
 Leu Thr Val Val Ala Asn Gly Gly Ile Ile Cys Met Val Ile Phe Thr
 145 150 155 160
 Phe Leu Leu Ile Ser Cys Gly Val Ile Leu Asn Phe Leu Lys Thr Tyr
 165 170 175
 Ser Gln Glu Glu Arg His Lys Ala Leu Pro Thr Cys Ile Ser His Ile
 180 185 190
 Ile Val Val Ala Leu Val Phe Val Pro Cys Ile Phe Met Tyr Val Arg
 195 200 205
 Pro Val Ser Asn Phe Pro Phe Asp Lys Leu Met Thr Val Phe Tyr Ser
 210 215 220
 Ile Ile Thr Leu Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Gln Ser
 225 230 235 240
 Glu Met Lys Asn Ala Met Lys Asn Leu Trp Cys Glu Met Leu Ser Ile
 245 250 255
 Val Arg Lys Arg Val Ser Pro Thr Leu Asn Ile Phe Ile Pro Ser Ser
 260 265 270

Lys Ala Thr Asn Arg Arg
275

<210> 189
<211> 957
<212> DNA
<213> Homo sapiens

<400> 189
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ggaaaatatt tccatgggtc tctcatctca catagagaaa cagctccaca ccccatgta 180
cttcctcctc agtcaactgt ccttatgga cctcatgctc atctgcacca ctctacccaa 240
gatgatcttc agctacttgt ctgggaagaa atctatctct ctggcagggt gtggaactca 300
gatattcttc tatgtgtccc tgcttgagac tgaatgttct ttgttggtct tcatggctta 360
tgaccgctat gtggctatat gtcacctctc tcagtacacc atcctcatga atccgaaact 420
ctgtgtcttc atgactgttg cttcctggac ctgggggtct cttgatggga tcatagtgtc 480
tgcagctgtc ctgtcatttt ctactgcag ctctctggaa attcatcact ttttctgtga 540
tggtgtgtcc cttttacctc taccctgcac agaaacatct gcatttgaaa gactacttgt 600
catttggtgt gtggtaatgc taatctttcc agtttcagtt atcatacttt cctattccca 660
tgtccttcca gccgtcatcc acatgggctc tggggaaaagt cgtcgcaagg ccttcaacta 720
ctgctcctcc cacctgtctg tggctggact ctactacggt gctgctatgt tcatgtacat 780
gagaccagct tctaaacata cgccagacca ggacaagatg gtgtcggcct tctacactat 840
tctcaccctc atgtgaacc ctctcattta tagcctccgc aacaaagaag tgttcagggc 900
actacagaag gtactgaaga aaagaaagtt aatatgacct tatcaaaatc tttttga 957

<210> 190
<211> 311
<212> PRT
<213> Homo sapiens

<400> 190
Met Val Trp Glu Asn Gln Thr Phe Asn Ser Ile Phe Ile Leu Leu Gly
1 5 10 15
Ile Phe Asn His Ser Pro Thr His Thr Phe Leu Phe Ser Leu Val Leu
20 25 30
Gly Ile Phe Ser Leu Ala Leu Met Glu Asn Ile Ser Met Val Leu Leu
35 40 45
Ile Tyr Ile Glu Lys Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
50 55 60
Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Leu Pro Lys
65 70 75 80

Met Ile Phe Ser Tyr Leu Ser Gly Lys Lys Ser Ile Ser Leu Ala Gly
 85 90 95
 Cys Gly Thr Gln Ile Phe Phe Tyr Val Ser Leu Leu Gly Ala Glu Cys
 100 105 110
 Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Gln Tyr Thr Ile Leu Met Asn Pro Lys Leu Cys Val Phe Met
 130 135 140
 Thr Val Ala Ser Trp Thr Leu Gly Ser Leu Asp Gly Ile Ile Val Leu
 145 150 155 160
 Ala Ala Val Leu Ser Phe Ser Tyr Cys Ser Ser Leu Glu Ile His His
 165 170 175
 Phe Phe Cys Asp Val Ala Ala Leu Leu Pro Leu Ser Cys Thr Glu Thr
 180 185 190
 Ser Ala Phe Glu Arg Leu Leu Val Ile Cys Cys Val Val Met Leu Ile
 195 200 205
 Phe Pro Val Ser Val Ile Ile Leu Ser Tyr Ser His Val Leu Arg Ala
 210 215 220
 Val Ile His Met Gly Ser Gly Glu Ser Arg Arg Lys Ala Phe Thr Thr
 225 230 235 240
 Cys Ser Ser His Leu Ser Val Val Gly Leu Tyr Tyr Gly Ala Ala Met
 245 250 255
 Phe Met Tyr Met Arg Pro Ala Ser Lys His Thr Pro Asp Gln Asp Lys
 260 265 270
 Met Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Phe Arg Ala Leu Gln Lys Val
 290 295 300
 Leu Lys Lys Arg Lys Leu Ile
 305 310

<210> 191

<211> 950
 <212> DNA
 <213> Homo sapiens

<400> 191
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 tcttcaatca tagccccacc cacaccttcc tcttctttct ggtcctggcc atcttttcag 120
 tggccttcat gggaaactcc atcatgggtc tcctcatcta cctggatacc cagctccaca 180
 ccccatgta cttcctcctc agccaactgt ccctcatgga cctcatgctc atctgcacca 240
 ctgtacccaa gatggccttc aactacttgt ctggcagcaa gtccatttct atggctggct 300
 gtgccacaca aattttcttc tatatatcat tgcttggctc cgaatgcttt ctgttggctg 360
 ttatgtctta tgaccgctac actgccattt gccaccctct aagatacacc aatctcatga 420
 gacccaaaat ttgtggactt atgactgcct tctcctggat cctgggctct acagatggaa 480
 tcattgatgc tgtagcgaca ttttccttct cctactgtgg gtctcgggaa atagccact 540
 tctgctgtga cttcccttcc ctactaatcc tctcatgcaa tgacacatca atatttgaag 600
 aggttatattt catctgctgt atagtaatgc ttgttttccc tgttgcaatc atcatcactt 660
 cctatgctcg agttattctg gctgtcattc acatgggatc tggagaggga cgtcgcaaag 720
 cttttactac ttgttcctct cacctcatgg tgggtgggaat gtactatgga gcaggtttgt 780
 tcatgtgcat tcagcccaca tctcatcatt ctccatgca ggacaagatg gtgtctgtat 840
 tctacaccat cgtcactccc atgctgaatc ctctcattta tagcctccgc aacaaggaag 900
 tgaccagagc attaatgaaa atcttaggaa agggcaagtc tggagattga 950

<210> 192
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 192
 Met Ala Trp Glu Asn Gln Thr Phe Asn Ser Asp Phe Leu Leu Leu Gly
 1 5 10 15
 Ile Phe Asn His Ser Pro Thr His Thr Phe Leu Phe Phe Leu Val Leu
 20 25 30
 Ala Ile Phe Ser Val Ala Phe Met Gly Asn Ser Ile Met Val Leu Leu
 35 40 45
 Ile Tyr Leu Asp Thr Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60
 Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Val Pro Lys
 65 70 75 80
 Met Ala Phe Asn Tyr Leu Ser Gly Ser Lys Ser Ile Ser Met Ala Gly
 85 90 95
 Cys Ala Thr Gln Ile Phe Phe Tyr Ile Ser Leu Leu Gly Ser Glu Cys

100	105	110
Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Thr Ala Ile Cys His		
115	120	125
Pro Leu Arg Tyr Thr Asn Leu Met Arg Pro Lys Ile Cys Gly Leu Met		
130	135	140
Thr Ala Phe Ser Trp Ile Leu Gly Ser Thr Asp Gly Ile Ile Asp Ala		
145	150	155
Val Ala Thr Phe Ser Phe Ser Tyr Cys Gly Ser Arg Glu Ile Ala His		
	165	170
Phe Cys Cys Asp Phe Pro Ser Leu Leu Ile Leu Ser Cys Asn Asp Thr		
	180	185
Ser Ile Phe Glu Glu Val Ile Phe Ile Cys Cys Ile Val Met Leu Val		
	195	200
Phe Pro Val Ala Ile Ile Ile Thr Ser Tyr Ala Arg Val Ile Leu Ala		
	210	215
Val Ile His Met Gly Ser Gly Glu Gly Arg Arg Lys Ala Phe Thr Thr		
	225	230
Cys Ser Ser His Leu Met Val Val Gly Met Tyr Tyr Gly Ala Gly Leu		
	245	250
Phe Met Cys Ile Gln Pro Thr Ser His His Ser Pro Met Gln Asp Lys		
	260	265
Met Val Ser Val Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Leu		
	275	280
Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Arg Ala Leu Met Lys Ile		
	290	295
Leu Gly Lys Gly Lys Ser Gly Asp		
305	310	

<210> 193
 <211> 977
 <212> DNA
 <213> Homo sapiens

<400> 193

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acaccagagc ccaccaagtc ctcttcatga tgcttctggc caccgttttg acctccctgt 120
ttagcaatgc cctcatgatt ctctgattc actgggacca ccggctccac aggcccatgt 180
acttctcct gagccaactt tccctcatgg acatgatgct ggtttccacc actgtgcca 240
aaatggcggc tgactacttg accggaaata aggccatctc ccgcgctggc tgtggtgtgc 300
agatcttctt cctccccaca ctgggtgggtg gagagtgcct cctcttagca gccatggcct 360
atgaccgcta tgcggctgtc tgccaccac tccgatatcc cactctcatg agctggcagc 420
tgtgcctgag gatgaccatg tcgtcctggc tcctgggtgc agctgacggc ctctgcagg 480
ctgttgctac cctgagcttc ccatattgcg gtgcacacga gatcgatcac ttcttctgcg 540
aggccccgt gttggtgctg ttggcttgtg ctgacacttc agtcttcgaa aacgccatgt 600
acatctgctg tgtgttaatg ctctggtcc ccttttccct catcctgtcc tcctatggtc 660
tcacctcgc tgcgttctg ctcatgcgct ctacagaagc ccgcaagaag gcctttgcca 720
cctgctcttc acatgtggct gtggtgggac tcttttatgg agctgccatt tttacctata 780
tgagacccaa atcccatagg tccactaacc atgacaaggc tgtgtcagcc ttctatacta 840
tgttcacccc ttactaaac cccctcatct acagtgtgaa gaacagtgag gtgaagggag 900
ccctgaaacg gtggctggg acgtgtgtaa acataaaaca ccagcaaat gagggccaca 960
ggtcaagatg atctaataat
977

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<210> 194
 <211> 320
 <212> PRT
 <213> Homo sapiens

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<400> 194
Met Glu Met Arg Asn Thr Thr Pro Asp Phe Ile Leu Leu Gly Leu Phe
  1             5             10            15

Asn His Thr Arg Ala His Gln Val Leu Phe Met Met Leu Leu Ala Thr
      20             25            30

Val Leu Thr Ser Leu Phe Ser Asn Ala Leu Met Ile Leu Leu Ile His
      35             40            45

Trp Asp His Arg Leu His Arg Pro Met Tyr Phe Leu Leu Ser Gln Leu
      50             55            60

Ser Leu Met Asp Met Met Leu Val Ser Thr Thr Val Pro Lys Met Ala
      65             70            75            80

Ala Asp Tyr Leu Thr Gly Asn Lys Ala Ile Ser Arg Ala Gly Cys Gly
      85             90            95

Val Gln Ile Phe Phe Leu Pro Thr Leu Gly Gly Gly Glu Cys Phe Leu
      100            105           110

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys His Pro Leu
      115            120           125

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Arg Tyr Pro Thr Leu Met Ser Trp Gln Leu Cys Leu Arg Met Thr Met
 130 135 140
 Ser Ser Trp Leu Leu Gly Ala Ala Asp Gly Leu Leu Gln Ala Val Ala
 145 150 155 160
 Thr Leu Ser Phe Pro Tyr Cys Gly Ala His Glu Ile Asp His Phe Phe
 165 170 175
 Cys Glu Ala Pro Val Leu Val Arg Leu Ala Cys Ala Asp Thr Ser Val
 180 185 190
 Phe Glu Asn Ala Met Tyr Ile Cys Cys Val Leu Met Leu Leu Val Pro
 195 200 205
 Phe Ser Leu Ile Leu Ser Ser Tyr Gly Leu Ile Leu Ala Ala Val Leu
 210 215 220
 Leu Met Arg Ser Thr Glu Ala Arg Lys Lys Ala Phe Ala Thr Cys Ser
 225 230 235 240
 Ser His Val Ala Val Val Gly Leu Phe Tyr Gly Ala Ala Ile Phe Thr
 245 250 255
 Tyr Met Arg Pro Lys Ser His Arg Ser Thr Asn His Asp Lys Val Val
 260 265 270
 Ser Ala Phe Tyr Thr Met Phe Thr Pro Leu Leu Asn Pro Leu Ile Tyr
 275 280 285
 Ser Val Lys Asn Ser Glu Val Lys Gly Ala Leu Lys Arg Trp Leu Gly
 290 295 300
 Thr Cys Val Asn Ile Lys His Gln Gln Asn Glu Ala His Arg Ser Arg
 305 310 315 320

<210> 195

<211> 884

<212> DNA

<213> Homo sapiens

<400> 195

cactggagat tctcctctgt ggacttttct ctgccttcta tacactcacc ctgctgggga 60

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atgggggtcat ctttgggatt atctgcctgg actgtaagct tcacacaccc atgtacttct 120
tcctctcaca cctggccatt gttgacatat cctatgcttc caactatgtc cccaagatgc 180
tgacgaatct tatgaaccag gaaagcacca tctccttttt tccatgcata atgcagacat 240
tcttgtattt ggcttttgct cacgtagagt gtctgatttt ggtgggtgatg tcctatgatc 300
gctatgcgga catctgccac cccttacggt acaatagcct catgagctgg agagtgtgca 360
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tgtctgtcct caagttggcc tgtgctgaca cctggctcaa ccagggtgtc atctttgcag 540
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tggccgccat cttgaggatc cagtctgggg agggccgcag aaaggccttc tccacctgct 660
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ccaagtcccg ccacctgag gagcagcaga aagttctttc cctgttttac agccttttca 780
atccaatgct gaacccctg atatatagcc taaggaatgc agagggtcaag ggcgcctga 840
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<210> 196

<211> 289

<212> PRT

<213> Homo sapiens

<400> 196

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Leu Glu Ile Leu Leu Cys Gly Leu Phe Ser Ala Phe Tyr Thr Leu Thr
  1                   5                   10                   15

Leu Leu Gly Asn Gly Val Ile Phe Gly Ile Ile Cys Leu Asp Cys Lys
      20                   25                   30

Leu His Thr Pro Met Tyr Phe Phe Leu Ser His Leu Ala Ile Val Asp
      35                   40                   45

Ile Ser Tyr Ala Ser Asn Tyr Val Pro Lys Met Leu Thr Asn Leu Met
      50                   55                   60

Asn Gln Glu Ser Thr Ile Ser Phe Phe Pro Cys Ile Met Gln Thr Phe
      65                   70                   75                   80

Leu Tyr Leu Ala Phe Ala His Val Glu Cys Leu Ile Leu Val Val Met
      85                   90                   95

Ser Tyr Asp Arg Tyr Ala Asp Ile Cys His Pro Leu Arg Tyr Asn Ser
      100                   105                   110

Leu Met Ser Trp Arg Val Cys Thr Val Leu Ala Val Ala Ser Trp Val
      115                   120                   125

Phe Ser Phe Leu Leu Ala Leu Val Pro Leu Val Leu Ile Leu Ser Leu
      130                   135                   140

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Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe Cys Glu Ile Leu
 145 150 155 160
 Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu Asn Gln Val Val
 165 170 175
 Ile Phe Ala Ala Cys Val Phe Ile Leu Val Gly Pro Leu Cys Leu Val
 180 185 190
 Leu Val Ser Tyr Leu Arg Ile Leu Ala Ala Ile Leu Arg Ile Gln Ser
 195 200 205
 Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser Ser His Leu Cys
 210 215 220
 Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val Thr Tyr Met Ala Pro
 225 230 235 240
 Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu Ser Leu Phe Tyr
 245 250 255
 Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn
 260 265 270
 Ala Glu Val Lys Gly Ala Leu Arg Arg Ala Leu Arg Lys Glu Arg Leu
 275 280 285

Thr

<210> 197

<211> 957

<212> DNA

<213> Homo sapiens

<400> 197

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 cagtcccacc cacaccttcc ttttttctct ggtcctgggc atcttctcac tggcattgat 120
 ggaaaatatt tccatggttc tcctcatcta catagagaaa cagctccaca ccccatgta 180
 cttcctcctc agtcaactgt cccttatgga cctcatgctc atctgcacca ctctacccaa 240
 gatgatcttc agctacttgt ctgggaagaa atctatctct ctggcagggt gtggaactca 300
 gatattcttc tatgtgtccc tgcttgagc tgaatgtttc ttgttggtg tcatggctta 360
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 tgcagctgtc ctgtcatttt cttactgcag ctctctggaa attcatcatt ttttctgtga 540
 tgttgctgcc cttttacctc tatccgcac agaaacatct gcatttgaaa gactacttgt 600

catttggtgt gtggtaatgc taatctttcc agtttcagtt atcatacttt cctattccca 660
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 ctgctcctcc cacctgtctg tggtcggact ctactacggt gctgctatgt tcatgtacat 780
 gagaccagct tctaaacata cgccagacca ggacaagatg gtgtcggcct tctacactat 840
 tctcaccct atgtgaacc ctctcattta tagcctccgc aacaaagaag tggtcagggc 900
 actacagaag gtactgaaga aaagaaagtt aatatgacct tatcaaaatc tttttga 957

<210> 198

<211> 311

<212> PRT

<213> Homo sapiens

<400> 198

Met Val Trp Glu Asn Gln Thr Phe Asn Ser Ile Phe Ile Leu Leu Gly
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Ile Phe Asn His Ser Pro Thr His Thr Phe Leu Phe Ser Leu Val Leu
 20 25 30

Gly Ile Phe Ser Leu Ala Leu Met Glu Asn Ile Ser Met Val Leu Leu
 35 40 45

Ile Tyr Ile Glu Lys Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln Leu Ser Leu Met Asp Leu Met Leu Ile Cys Thr Thr Leu Pro Lys
 65 70 75 80

Met Ile Phe Ser Tyr Leu Ser Gly Lys Lys Ser Ile Ser Leu Ala Gly
 85 90 95

Cys Gly Thr Gln Ile Phe Phe Tyr Val Ser Leu Leu Gly Ala Glu Cys
 100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Gln Tyr Thr Ile Leu Met Asn Pro Lys Leu Cys Val Phe Met
 130 135 140

Thr Val Ala Ser Trp Thr Leu Gly Ser Leu Asp Gly Ile Ile Val Leu
 145 150 155 160

Ala Ala Val Leu Ser Phe Ser Tyr Cys Ser Ser Leu Glu Ile His His
 165 170 175

Phe Phe Cys Asp Val Ala Ala Leu Leu Pro Leu Ser Arg Thr Glu Thr

	180		185		190										
Ser	Ala	Phe	Glu	Arg	Leu	Leu	Val	Ile	Cys	Cys	Val	Val	Met	Leu	Ile
	195						200					205			
Phe	Pro	Val	Ser	Val	Ile	Ile	Leu	Ser	Tyr	Ser	His	Val	Leu	Arg	Ala
	210						215					220			
Val	Ile	His	Met	Gly	Ser	Gly	Glu	Ser	Arg	Arg	Lys	Ala	Phe	Thr	Thr
225					230					235					240
Cys	Ser	Ser	His	Leu	Ser	Val	Val	Gly	Leu	Tyr	Tyr	Gly	Ala	Ala	Met
				245					250					255	
Phe	Met	Tyr	Met	Arg	Pro	Ala	Ser	Lys	His	Thr	Pro	Asp	Gln	Asp	Lys
			260					265						270	
Met	Val	Ser	Ala	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Met	Leu	Asn	Pro	Leu
	275						280					285			
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Phe	Arg	Ala	Leu	Gln	Lys	Val
	290					300									
Leu	Lys	Lys	Arg	Lys	Leu	Ile									
305					310										

<210> 199

<211> 937

<212> DNA

<213> Homo sapiens

<400> 199

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gggtgggcaac ttgagtttaa ttaatctaata ttgcctgaat tcacaccttc aactcccat 180
gtatTTTTTt cttttcaatc tgtccttcat tgatctctgt tattcatttg tctttacccc 240
caaatgctg atgagcttta tttcagagag gaacatcatc tctttccag gatgcataac 300
tcagctcttt ttcttctgct tttttgtcca ctctgagtgc tatgtgctga cagccatggc 360
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gatctgttct ctactgatgc ttggttcata tgtgatggg tttgctggg ccatgggtcca 480
cacagagtgt atgatgaagc tcatcttttg tgactccaac gtcatacaac attacatgtg 540
tgacatcttc ccaactgctc agctctcctg cagcagcacc caggccaatg agctgggtgat 600
gtctgttatt gtaggcacag ttgttatagt atcaagcctc attatcttaa tctcttatgc 660
tttgattctt ttcaatatcc ttcacatgtc ctacagccgag gggttggttca aagccatcgg 720
tacctgtggc tccacataa taactgttgg cctattctat gaatttgggc tgatcactca 780
tgtaaagtta tcatctgatt ggtatatggg tcaggggaag tttctctcag tgttttacac 840
gaatgtggtg ccatgctga accccctcat ttatagcctc aggaacaagg atgtcaaact 900

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tgctctaaag gaaaccctaa ataaaattac aaactga

937

<210> 200

<211> 313

<212> PRT

<213> Homo sapiens

<400> 200

Met Leu Ala Arg Asn Asn Ser Leu Val Thr Glu Phe Ile Leu Ala Gly
1 5 10 15

Leu Thr Asp His Pro Glu Phe Gln Gln Pro Leu Phe Phe Leu Phe Leu
20 25 30

Val Val Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Ile Leu
35 40 45

Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
50 55 60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
65 70 75 80

Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Tyr Val Gly
85 90 95

Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
100 105 110

Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
130 135 140

Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr
145 150 155 160

Gly Cys Met Leu Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His
165 170 175

Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
180 185 190

Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Met
195 200 205

Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
 210 215 220
 Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
 245 250 255
 Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
 260 265 270
 Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
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 Ile Lys Ile Gln Arg Arg Asn Ile Phe
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tgccactttt cagcttactt tctgca 26

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Sequence

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<400> 224
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22

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22

<210> 232
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Sequence

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<210> 233
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<400> 233 22
tagaacacag aggccacatt ct

<210> 234
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atacaaatgt ggtcccatg tt

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22

<210> 237

<211> 22

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22

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26

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22

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<210> 247
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agctgttcat ccttgaatca ga 22

<210> 249
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aagaagatcc cttccacaga ag 22

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aagaagatcc cttccacaga ag 22

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26

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22

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27

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22

<210> 270

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22

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30

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22

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22

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22

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26

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22

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acacacaggc caccaactta ta 22

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<210> 293
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gagtccatag gagccagtga ta 22

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<400> 294
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<400> 297
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Sequence

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22

<210> 307

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Sequence

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26

<210> 308

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22

<210> 309

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22

<210> 310

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 <400> 311
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 <210> 312
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<210> 314

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<210> 315

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Sequence

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<210> 317

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Sequence

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22

<210> 318

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<212> DNA

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 Sequence

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22